SEEKER NUMBER 1

BY

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ABSTRACT

Seeker Number 1

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Seeker Number 1 is an interactive story which combines performance, filmed by multiple cameras and streamed live, with an interactive installation at an exhibition space. Homer's Odyssey, the story's base narrative structure, is situated within multiple storylines and environments. Audience members are able to access and interact with the performance during the exhibition by exploring a physical setup with objects that relate to the story and characters. By experimenting with interactivity, open narrative structures, and the aura of live performers in the virtual space, *Seeker Number 1* attempts to bring liveness and emotional affect to the Interactive Digital Narrative.

This thesis uses research design methodology to explore how various combinations of dramatic structural elements, live performance, audience agency and computer procedural capabilities can collaboratively create meaning. *Seeker Number 1* is a reflection on the emergent relationship between liveness and networked technology represented by the machine.

Keywords: Interactive Storytelling, Digital Media, Live Performance, Liveness, Non-linear Dramatic Structure, Aura, Agency, Interactivity, Networked Technology, Broadcasting.

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CHAPTER I – INTRODUCTION

1.1 Storytelling in the Digital Age

In my thesis I examine the key themes in the field of interactive and emergent storytelling, structural elements involved in creating an interactive narrative and the creative challenges of authoring a story in a new way, while balancing real-time performative aspects with audience agency, networked technology and artistic control. I will also address the place of live performance in a Western, contemporary cultural environment and the relationship between live performance and media technology in the age of mass reproduction and "mediatized" performance. I use the term "mediatized" as defined by Baudrillard (1981): "What is mediatized is not what comes off the daily press, out of the tube, or on the radio: it is what is reinterpreted by the sign form, articulated into models, and administered by the code" (as cited in Auslander, 2008, p. 5). Baudrillard defines mediatization as more than just a representation and reproduction of what is live through the use of media, but rather, the creation and distribution of meaning which originates from the mediatized view of the world; the media is no longer simply a method of delivery, but an aspect of creative force itself.

Telling stories is a uniquely human method of social interaction. Constructing mental narratives connecting people and events is one of the primary

occupations for humans. Our separateness from the rest of the animal species, as we know it, lays in our ability and need to narrate and to reflect upon our existence. From the very beginning, at every step of our cultural and technological evolution, we adapted whatever means were available to us to tell and re-tell the story of our shared experiences. Using two main modes of communication – language and image – we have potentially managed to express the endless variations of human experience unified by a set of universal themes and scenarios. Joseph Campbell (2008) links the universality of storytelling themes to the "spontaneous production of the psyche" (2).

As humanity extended itself into the world through increasingly complex technological means, we adapted traditional methods of storytelling to incorporate them. From drawings and oral traditions to the hand-written word, often decorated (or illuminated) with hand painted images, to printed words and images, to moving images on big and small screens: humans continually expand and adapt our narrative instruments.

In the last two decades, our experience of day-to-day life has expanded dramatically to include a virtual aspect of reality through digital technologies. All major aspects of our existence have been affected by it. Our choices for working, learning, playing, socializing, creating and relaxing increasingly include an online, virtual domain. Many of us now traverse our virtual world with the similar authority and commonality as we do the physical world.

How does this significant integration of virtual life into our "real lives" affect our understanding of ourselves and the world around us? Since 1985, the theory of information has become the dominant sense-making theory of human experience, rearranging old notions into new frameworks. As we are becoming more embedded into the global network of interconnected cognitive systems, our sense of self is undergoing a qualitative change, affecting the way we perceive ourselves and reality itself. Virtual experience, interlaced with our physical existence, impacts our emotional and psychological being by shifting a significant part of our awareness, energies and emotional investment from the physical to the digital world.

How does this new reality affect our narrating practices? The arrival of the digital age represented a seismic shift in the fields of communication and storytelling. It significantly increased our potential for creating immersive, interactive, narrative experiences; at the same time, it created myriad challenges for adapting traditional narrative practices to radically different instruments of transmission. Linear forms of narrative such as the novel, film and episodic TV drama, have always been structured around strict authoring control of the creator(s) and mostly passive engagement of the readers and viewers. Although actively engaging cognitively (psychologically, emotionally and semiotically), readers had little to no control over the structure and outcome of the story. The affordances of the computer as a procedural, participatory, encyclopedic and spatial pattern-making medium allowed for the new ways to create, navigate,

inhabit and observe imaginary worlds (J. Murray, 2004). The possibility of agency, interactivity and shared experience brought forth new forms of storytelling infusing them with play, collaboration and active participation. The new medium of interactive storytelling includes, among others, video games, interactive fiction and drama, hypertext narrative, installation art and immersive theatre. This relatively new field is currently moving through a period of rapid growth, experimentation and growing pains. The challenge of defining the new territory and developing a robust new framework for creating and experiencing narrative, is ongoing.

The theory of narratology, as conceived by Barthes and Bremond in 1960s, had to be revised to include the new properties offered by digital media. Traditional notions, such as creative control of the author, the passive role of the viewer and the linear rules of narrative structure, no longer reflect the changed terrain. In the last few decades, a number of new models were proposed to reflect the new reality. Interactive Digital Narrative (IDN) became a recognized field, leading the theoretical discourse in a new chapter of narrative theory. The key terms of this domain are digital media, interactivity and narrative (Koenitz, 2015). A new theoretical framework started to emerge, starting with Janet Murray (1997), who defined the phenomenological categories of agency, immersion and transformation, and Brenda Laurel (2013), who described procedural, participatory, spatial and encyclopedic affordances of the computer, many theorists and practitioners worked on formulating a coherent theoretical approach

in application of narrative theory to interactive digital narrative (Koenitz, 2015). Barthes, who brought forward ideas of narrative as system of reoccurring patterns imbedded with multiple codes (1975), later argued against the authority of the author, reducing the position of the author as merely a scripter, while the meaning of work emerging from the impressions of the reader, rather than from "passions" or "tastes " of the writer (Barthes, 1977). Other game changers included Pamela Jennings's work on African oral storytelling, Nick Montfort's insistence that "a work of Interactive Fiction is not itself a narrative; it is an interactive computer program" (as cited in Koenitz, 2015), and Hartmut Koenitz, in his article "Towards a Specific Theory of Interactive Digital Narrative" (2015), defining IDN as "an expressive narrative form in digital media implemented as a computation system containing potential narratives and experienced through a participatory process that results in products representing instantiated narratives."

This thesis explores the potential and limitations of digital media as narrative instruments. My particular interest lies at the intersection of computer affordances, network capabilities and real time, live performance. The second part of twentieth century saw the diminishing of the status of live performance in the culture dominated by mass media. "Televisual, of which VR is the latest advancement, has become a primary repository for cultural memory" (Causey, 2007). Much of a contemporary discourse surrounding live performance and mediatized performance points at their essential differences, dismissing the fact that theatre had always been virtual, a space of illusionary and uncanny (Causey,

2007). The performative act by its nature is an act of extension – of the body's physical abilities, energy and presence. An actor on stage is engaged in a highly unnatural act of enlarging, magnifying and distancing. An actor is engaging with what Heidegger calls "thingness of the thing." Similarly, Heidegger defines the essence of technology as a "bringing forth, a way of allowing that which is not yet present to arrive into presencing" (as cited in Causey, 2007, p. 33).

Live performers extend themselves towards the unknown of the future; technology brings forth a shift that mirrors the performers' task. Could those two acts coexist? What new opportunities for storytelling could be discovered by extending live performance into the virtual? Walter Benjamin addresses the issues of performing for the camera in his famous essay, "The Work of Art in the Age of Mechanical Reproduction". Benjamin posits that the impact on actors of performing for a machine instead of a human audience creates an uncomfortable experience, in which the body is deprived of substance. There is a feeling of strangeness, similar to looking in a mirror, but with the mirror image separable and transportable (Benjamin, 2008). In my exploration of liveness as a part of online interactive experience I wanted to test this statement, as well as Benjamin's ideas about aura, which he described in two different ways: as "a strange weave of space and time: the unique appearance [apparition, semblance] of a distance, however near it may be"(Benjamin, 1996) and; "as a form of perception that 'invests' or endows a phenomenon with the 'ability to look back at us,' to open its eyes or 'lift its gaze'"(Benjamin, 1939). "The things I look at see me just as much

as I see them," states Benjamin (as cited in Hansen, 2008, p. 345), opening a conversation with the suggestion that properties of aura are not necessarily limited to the performers in the life theatre, but might somehow extend to the processed image looking back from a photograph or a film. "If the aura is in early photographs, why is it not in film? Are there ways of translating aura's defining moments of disjunctive temporality and self-dislocating reflexivity into a potential for the collective, as the structural subject of cinema?" (Hansen, 2008). Hansen believes that Benjamin was able to think of "salient features of auratic experience — temporal disjunction, the shock-like confrontation with an alien self—as asymmetrically entwined rather than simply incompatible with technological reproducibility and collective reception" (Hansen, 2008, p.350).

This recognition by Benjamin of the possibility of some reconciliation between auratic experience and technological reproducibility is what makes his thoughts on aura highly relevant to my inquiry.

My interest lies in discovering whether the metaphysical (where we define performance as "an 'enactment' of the performance of being" (Tassi, 1998, p. 1), and visceral (intuitively perceived) qualities of live performance may exist in the virtual and televisual domains.

Seeker Number 1 is an online, live, interactive performance inspired by Homer's *Odyssey*. The project is in its early stage and is intended to be released serially, in thirty-minute episodes. The prototype of the first episode was created as a part of this thesis. The creative process included:

- Literature review into the Interactive Digital Narrative field, performance theory, liveness and mediatization.
- Exploration of precedent works
- Improvisation, brainstorming and filming with the theatre company Kadozuke Kollektif
- Narrative design
- Reflection on the process through visual diary on Tumblr; sketching; mind-mapping and recorded audio interviews.
- Prototyping the user interface and developing code

1.2 Motivation for Undertaking the Research

My interest lies in combining live performance and digital affordances into the online, interactive experience.

I have been a theatre practitioner for more than 30 years. In the last 18 years, I directed and created more than two dozen productions and interactive multimedia installations: performances combining technology and live performers. I am also an artistic director of Kadozuke Kollektif, a theatre company that has been creating experimental, original work for the past 11 years. Our interest in developing an innovative performance style enhanced by

technological elements led us to explore long form digital/live narrative delivered online in a serial form.

I have chosen Digital Futures for my Master of Arts degree in order to further develop this concept. After completion of the program, I plan to take what I have developed into full production.

1.3 Why Odyssey?

My choice of the *Odyssey* as the inspiration for the *Seeker Number 1* is a result of a strong personal connection to this material. I, transient, dispossessed, a traveler in foreign lands, I find similitude with the father of all travelers, the original seeker: Odysseus.

This story is rich with meaning and metaphor. The epic is filled with universal themes that resonate with contemporary times and issues, such as conflict, displacement, a journey in search of belonging, separation, and revenge. But the Odyssean themes which I find personally significant are these:

- Home, the place you no longer inhabit physically, yet in which you still linger mentally.
- People whose lives moved on without you, while their younger ghosts still haunt your memories.

- Your new home; all the work you have to do to make it smell and feel like the real thing.
- The family you create from scratch, from the ground up; the family of which you are the head and to which you cling for dear life.
- The journey you will never be able to finish. Journey as a state of being.

These themes resonate most strongly with me personally from the epic's universal themes. Making a personal connection with the text and finding subject matter that resonates is a part of my creative approach in developing a personal work using the framework of classical literary source. The initial steps I take in order to uncover the connective tissue between the work and my personal, artistic voice is to continuously read and listen to the text. Next, I improvise using the words and themes of the classical text, without predetermined ideas, to see what associative personal narrative arises in response. The first round of meaning making is very much a study in application of Barthes's semantic code (Barthes & Miller, 1975), a free-form association of ideas. In my exploration of the *Odyssey*, Home as a mental construct and Journey as a state of being bubbled up most often. Therefore, those are the themes I have chosen to explore in *Seeker Number 1*.

This is the story of two unresolvable states of being: Static/Home versus Permanently in Flux/Journey, separated by an impassible divide and impeded by indifferent or punishing Gods. This is a story of intrepid people, protagonists who keep carrying on, never letting go of hope.

In this project I am attempting to create a world, populated with actors wandering in the labyrinth of the *Odyssey*, which is open enough to the audience so that they can not only watch, but also affect the narrative in some small ways. This live/virtual world is also subject to the unpredictable actions of temperamental Gods, whose cryptic messages add to the confusion. In creating this performance, I provide a bridge for one of the oldest literary work of Western culture to continue its journey across millennia, utilizing the technology of each communication era up through today: from oral to written to filmed to coded.

1.4 Contribution to the Field

As a theatre practitioner who, for many years, has been experimenting with integrating technology into live performance, I endeavor to contribute to the advancement and innovation in the field of interactive digital storytelling. I believe that the unique qualities of theatre, which at their core are connected to and emerge from its liveness, can be extended into digital domain, allowing performers' presence and aura to affect the audiences across the digital divide and enhance the possibilities for compelling storytelling.

- By bringing live performance into Interactive Digital Narrative I am exploring the potential for deep emotional engagement (catharsis) in digital storytelling.

- By re-telling old stories through combining liveness with the use of digital tools, I hope to revive the spirit of the original theatrical context.

1.5 Research Questions

Hypothesis:

Liveness can enhance the quality of digital performances' emotional affect; the special qualities of liveness, aura, and presence can be infused into cyber performances.

My research and experimentation is centered on exploring various combinations of dramatic structural elements, computers' procedural capabilities and audience agency.

My main research questions:

- How might the inclusion of live performance affect the creation and experience of interactive digital narrative?

- How might the aura/presence of live performance be re-discovered in post-organic performance?
- How might we establish processes and practices that support the creation of such experiences?

Secondary questions:

- How might I orchestrate live performers and online audience members to co-create an online, event based, engaging, and meaningful interactive narrative?
- How might I preserve the thematic significance of the story while allowing for meaningful participation and agency?
- How might the different degrees of participation be defined and offered?

CHAPTER II - LITERATURE REVIEW

2.1 Live Performance in the Age of Mediatization

In this chapter I will address the issues of liveness in the contemporary theatrical performance and the discourse around use of digital and televisual attributes by the theatre artists. I will also reflect on the ideological discussion surrounding live performance as a last stand against proliferation of mass media. Both topics add an important context to the subject of my research on possibilities of combining live performance and computer affordances.

The definition of liveness as used in this context could be described as a particular temporal and spatial property of an experience: being present in the same space as the event that is being experienced. The spatial aspect of liveness remains a subject of debate. Oxford English Dictionary focuses more on temporal quality of liveness since, with the rise of broadcasting technology, being physically in the same place as a live event is becoming antiquated ("Liveness - Dead Media Archive," (n.d.). For the medium of live theatre, the spatial aspect had until very recently been a deciding quality, without which the whole paradigm of live performance was perceived to be in danger of crumbling. Currently, the medium of live theatre is experiencing an identity crisis, as its theorists insist on ideological purity while many of its practitioners are adapting all kinds of mediated practices and experimenting with various enhancements and delivery

methods via available technology in order to stay competitive in the technology and media-driven world. The antagonistic opposition of live performance theorists to mediatisation is analyzed in Phillip Auslander's important work: "Liveness: Performance in a Mediatized Culture", which deals specifically with the status of live performance in the culture dominated by mass media (Auslander, 2008). The discussion includes multiple aspects of contemporary performance in regard to purity of liveness: use of recording media in otherwise live performance, live events experienced through the use of broadcasting, experimentation with social platforms as the medium for performance, and so on. This stands in contrast to liveness as only imbued by the impact of a live performer on an empty stage, as defined in the mid-20th century by theatre giants Eji Grotovski and Peter Brook. In that discourse, live performance is proclaimed to be a site of cultural and economic resistance to mediatisation (Auslander, 2008).

Eric Bogosian (2012) wrote in his one-person play, "Pounding Nails in the Floor with my Forehead", in 1994, "Theatre is holy, instead of being bombarded by a cathode ray tube we are speaking to ourselves. Human language, not electronic noise."(xii). Steve Wurtzler (as cited in Auslander, 2008, p.14) commented on the state of contemporary rock music: "As socially and historically produced, the categories of the live and the recorded are defined in a mutually exclusive relationship, in that the notion of the live is premised on the absence of recording and the defining fact of the recorded is the absence of the live."

Such a strict division is useful only in ideological or purely theoretical discourse around the definition of performance; it does not reflect the challenges of artists practicing the art form. As practitioners struggle to address dwindling audiences, insufficient funding models and overwhelming competition with far wider reach, they must choose between adapting to contemporary reality or risk being considered antiquated and irrelevant. Also to be considered is the attraction and mystique of the technological affordances, which promise a possibility of innovation and fertile grounds for artistic exploration. In the end, the hope of every artist, whatever art form they employ, is to affect their audience while reflecting the nature of their times.

Auslander describes the existing situation as the one where live performance is no longer a main vehicle for the contemporary cultural code, and where it cannot compete on the cultural-economic front (Auslander, 2008). Although big events still can pack stadiums and intimate performances, especially music concerts, can find dedicated audiences, these types of events remain on the margins of the public attention and cultural discourse. In that case, what cultural significance can liveness and the properties of live performance still claim in the proliferation of mediatized culture?

2.2 The Aura of the Posthuman

In this section of my literature review, I discuss the effect information theory had on the contemporary understanding of cultural and societal processes and states. I review the ideas of representational and informational spaces and the definition of the post-human in order to understand if the aura/presence of live performance may be re-discovered in post-organic performance. The term post-organic as it is related to performance was defined by Matthew Causey as "the appearance of theatre and performance in the virtual spaces of computer networks, where the immediacy of performance and the digital alterability of time, space and subjectivity overlap and are combined" (Causey, 2007).

Recently it became possible to achieve deeper insight into human and .societal states by utilizing big data and latest analytics engines to sift through wide variety of information on every aspect composing our social fabric. Big data can offer new understandings of everything from cultural preferences, ethnic and gender politics, sexual preferences, and personal interests, and can reflect the smallest changes in cultural and social environments (Terranova, 2004). The three dimensional, representational space, which gives support for identification and representation of self and others, is transformed by big data into a homogeneous informational space where "all identities and differences are reconfigured as macrostates or averages" (Terranova, 2004, p. 36). However, Terranova argues, the ultimate difference between representational and informational space is in the

picture of the world that is created as a result. The representational model is unable to keep up with the complexity and instability of informational space, which includes not only macro-scale but "a multiplicity of mutating variables" (Terranova, 2004, p. 37) and fluctuations.

The physical world, as expressed through information, comes out not as "…unknowable, but probabilistic, chaotic, indeterminable and open" (Terranova, 2004, p.37). What effect does our extension into the digital domain have on our perception of the world around us? Katherine Hayles's (2006) article, "From Cyborg to Cognisphere", echoes Andy Clark's (2004) book, "Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence". The premise of both works is that human cognition is not locked in some cognition box—our minds—but rather, is distributed throughout our physical functions and mental processes and even extends out of our bodies and into the objects, artifacts, technologies, companion species and virtual representations around us, creating a cognisphere, an assemblage: our extended self. The posthuman is "construed as an informational pattern that happens to be instantiated in a biological substrate" (Hayles, 2006, p.160).

As we are becoming more embedded into the global network of interconnected cognitive systems, our sense of self is undergoing a qualitative change, affecting not only the way we perceive ourselves, but our perception of reality itself. This extension of perceived reality is bound to affect the way we express our human experience through storytelling and performance. If

performance is an enactment of our way of being – the imitation of "performance of being" (Tassi, 1998) – then our continuous extension outward into real and digital objects has to be manifested in the ways we reflect on our experience. Does the contemporary state of liveness encompass various parts of our cognitive assemblage? How does this notion affect our definition of live performance in the virtual space?

2.3 Dramatic Storytelling and Narrative Structures

In this section of my thesis I review classical Aristotelian narrative structure and its deficiencies when applied to interactive storytelling. I will also discuss how the demand for audience agency affects the nature of authorship.

Aristotle on Poetics (Aristotle, 2013), the first serious work which defines the foundation of western dramatic structure, determines six categories necessary for the creation of a dramatic story: Plot, Character, Thought (reasoning for the events and characters), Diction (quality of language and speech), Melody and Spectacle. According to Aristotle's thought, in order to sustain dramatic tension and reach a catharsis—the powerful release of emotional tension—the structure of a dramatic work must follow an arc incorporating certain elements in a particular order. Aristotle specified three major parts of the dramatic arc: beginning, middle and end (Halliwell, 1986).

Gustav Freytag, a late nineteenth century German novelist and playwright, further divided the dramatic arc, adding two more components. According to Freytag, a successful dramatic plot should include exposition; rising action; climax; falling action and dénouement (Freytag & Ed, 1894).

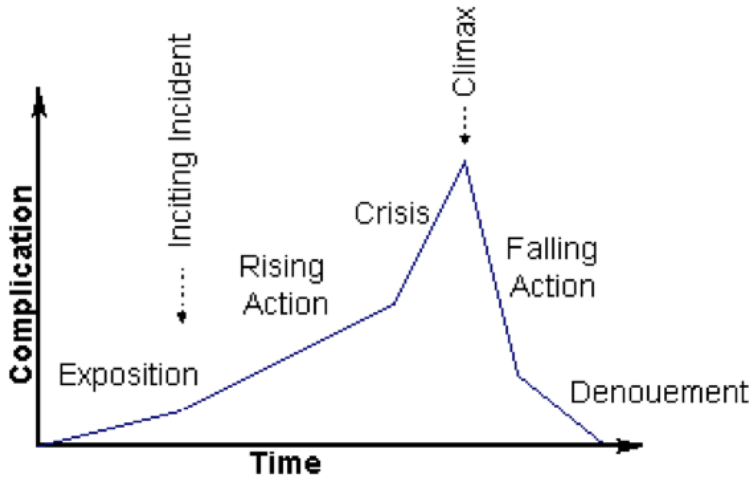


Figure 1, A modern version of Freytag triangle, (Freytag & Ed, 2015).

Exposition – A form of introduction, the exposition sows the seeds for a seemingly unavoidable progression of subsequent events. This first sequence or movement introduces the drama's characters, themes and subject matter to the audience, as if the audience knows nothing about what is about to unfold. The structure presumes that viewers are totally uninformed about the play's content, a supposition I disagree with, even in the case of most new and unknown works. Viewers come to a play not as blank slates, but as members of society holding public knowledge, expecting certain forms and aware of rules of behavior, all of

which exist *a priori* and contribute to the audience's experience of the exposition, even when that prior knowledge is challenged later in the drama.

Rising action – The events building up to climax are aligned in a certain way to allow for the build-up. In order to sustain dramatic tension, the pace adapted in the beginning must escalate throughout the piece. This pace is expressed in the rising rhythm, the shortening of the spacing of the events and intensifying emotional tension.

Climax – The climax is a main event of the dramatic work; it is the inevitable clash of opposing tensions, the highest spike on the chart.

Falling action – During the falling action, the main conflict unwinds and de-escalates from its climax, which leads to the drama's final outcome and either victory or defeat for the main protagonist.

Dénouement – Conflicts are resolved followed by the release of tensions, catharsis and the recovery, allowing time for thought and reflection.

Most parts of this basic structure can be reiterated multiple times throughout different sequences of the performance. In each scene and act (a collections of scenes united by a theme or a place), there is often a repetition of a similar structural pattern. The example bellow demonstrates a pattern repetition in the James Bond film *The Spy Who Loved Me.*

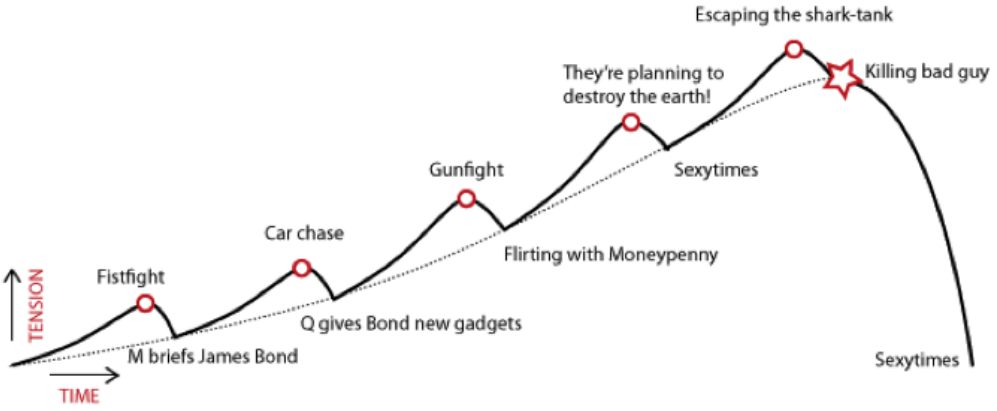


Figure 2, Dealing with the Aristotelian Curse, (Fatland, 2013)

Mark Meadows, in "Pause and Effect: The Art of Interactive Narrative" describes plot as a function which expresses relationship between time and the density of events (Meadows, 2002a). For Michael Mateas, in "A Preliminary Poetics for Interactive Drama" plot is a formal cause for the characters, their thought processes, language and behaviour. All of this presents the authorial view of the dramatic work (Mateas, 2010). The formal cause is described by Mateas as an abstract plan, the blueprint of the work. However, the work could only be fully realized through the addition of the audience's experience, a material cause. When the audience detects the patterns of the characters' behaviour and develops an understanding of their traits and propensities, it infers their thought process and finally understands the plot structure and theme; only then is the process is complete (Mateas, 2010).

Introduction of the computer as a narrative instrument changed the dynamic between the audience and the author by allowing the audience to co-

author the story. As a result, the line between the formal cause and the material cause become blurred. When we read a book, we engage mentally and emotionally with the story as well as physically with the book as an object; we cannot, though, change the actual details of the authored narrative one whit. The affordances of the computer, on the other hand, are not limited to a display. A computer acts as a mediator between the human and the information, allowing the person and the data to interact. This interaction is made available by an interface (Mateas, 2010). The digital medium redefines the boundaries of storytelling, allowing us an opportunity to enter the narrative created by someone else and actually affect it through the process of our experience. Janet Murray in her article, "From Game-Story to Cyberdrama" (2004), describes the computer as a procedural, participatory, encyclopedic, and spatial. It embodies the rules and executes them; it lets us manipulate its objects and creates a world we can navigate and immerse ourselves into. Instead of presenting the story for us to discover, as would the book or other narrative media such as film or television, the computer is always waiting for us to tell it what to do (Meadows, 2002b). But the implementation of agency and interaction inevitably destroys the carefully orchestrated tension of authored material. The difference between following tailored arc of events and moving through the emotional, chaotic, and unfocused wondering that is often present in interactive storytelling is in reduced emotional affect. In the play-oriented environment, such as video games, the tension is maintained by challenges and rewards, but application of similar techniques often

makes narrative-driven work predictable, monotonous and susceptible to the use of cliché.

In the domain of live performance, one of the basic rules states that the story and the performers must remain one step ahead of the audience, always maintaining tension and engagement by defying expectations. This is challenging to implement when the audience is afforded an opportunity to change direction on the whim, switching among storylines at any time, and affecting the rhythm and structure of the narrative.

In this thesis I address those challenges and explore various combinations of narrative structures and forms of interactivity in search of intuitive and meaningful agency, which can maintain and foster emotional engagement.

2.4 Digital Transforms Narrative Engagement

The proliferation of digital tools brought forth new ideas about narrative flexibility, audience agency and the promise of immersion. In this section of my thesis, I continue my exploration of the tension between narrative structure and computer affordances through reviewing the works of Janet Murray, Michael Mateas and Marie-Laure Ryan, among the others.

Intensity, catharsis, unity and closure are the properties of traditional dramatic structure. Exercising those properties to their highest potential delivers

an emotional impact. The audience of a traditional medium has no agency yet is intellectually and emotionally active in following the story along the lines carefully structured by the author, who leads them towards emotional impact. This changes when we move the discussion into the digital domain, where both the formal and material causes are affected by that change of medium. The most immediate and striking transformation happens to the audience: in Interactive Digital Narrative, the audience is transformed from viewers into users or players. The digital medium is particularly well-suited to gaming because it is procedural (generating behaviour based on established rules) and participatory (allowing the player and the creator to change and move things around) (J. Murray, 2004).

Janet Murray and Michael Mateas distinguish interactive narrative as a narrative in which the player doesn't just sit above the story, watching as one would a simulation, but is, rather, is immersed in it (Mateas, 2010). Furthermore, the digital medium presents narrative constructed from more building blocks of storytelling (still and moving images, text, audio, and three-dimensional navigable space) than any other medium (J. Murray, 2004). Murray, in her seminal work, *Hamlet on the Holodeck* (1997), describes phenomenological categories of the interactive story experience as:

- Immersion – Willing suspension of disbelief, or immersion, is acceptance of the internal logic of the experience, even if it deviates from real world logic; the audience experiences a feeling of being present in another place/time and that they are personally engaged in the action.

- Agency – This is the empowerment that comes from being able to take action in the world whose effects relate to the player's intention.
- Transformation – The experience allows the player to transform himself or herself into someone else for the duration of the game (J. H. Murray, 1997).

Eric Zimmerman, an influential American game designer and theorist describes the challenges creators of interactive narratives face in designing the potential for interactivity into a narrative experience structure. The design has to guide and encourage play while never completely scripting it in advance (Zimmerman, 2004). Meadows, too, acknowledges the new demands on plot. In developing interactive narrative, the plot has to accommodate a more flexible structure that is more of a system of connections, in which the timing of the events is determined by both author and audience (Meadows, 2002b).

Marie-Laure Ryan, a prominent literary scholar whose work encompasses narratology, fiction and cyberculture, identifies the problem that face designers when integrating the user's activity into the framework that fulfills the basic condition of storytelling (a sequence of events involving thinking individuals linked by casual relations, motivated by a conflict, and aiming at its resolution): The more life-like the user role is (relating to speed of reactions, decision making process and timing), the more problematic is its integration into a well-developed narrative arc (Ryan, 2004). This highlights another important difference, one between life-like and alive. Do we, as the audience of a narrative, desire an

experience reminiscent of real life, with its diffuse tension and wandering focus, or do we seek a heightened, immersive experience, wherein time is condensed and events are constructed with the purpose to affect and impact? If the latter, then the structure of the narrative must remain central to its success in producing an affecting experience. The agency of the audience must remain subservient to the organization of the story, if possible even enhancing its structure and adding to the overall effect.

2.5 Games and Play vs. Narrative and Story

This section addresses the fundamental difference between the nature of narrative and interactivity in video games vs. narrative centered storytelling and explores why current computer-based narrative forms are insufficient for creating immersive and complex narrative, compelling characters and believable relationships.

The most progress made in the interactive narrative field is situated in the domain of video games. Contemporary games are complex systems, which include three-dimensional interactive environments, game mechanics, multi-faceted multi-player participation and shared experiences. But what is the relationship between games and narrative? Does the structured, rule-based game experience have room for integration of a complex narrative? User experience designer and researcher Sebastian Deterding, in his article, “Fiction as Play:

Reassessing the Relation of Games, Play and Fiction" (2009), examines the nature of play and its relation to games as well as the relation of games to fiction. One of the most critical functions of play is that it temporarily suspends the usual roles and consequences. Humans, like other animals, are hardwired to enjoy play because it allows for transformation and representation of another behaviour, which in turn facilitates learning through creative repetition and recombination. Play is the quintessential prototype. The extent of play is situationally defined and agreed upon through shared conventions. The place and time wherein play happens is special, often unique to the type of play. (Deterding, 2009).

In a similar way, fiction stands apart from everyday life. There is a social contract that frees fiction from demands of truth, consequence, liability and economic value. Both, fiction and play, are deeply intertwined with internally coherent ritual and characterized by creative repetition and recombination (Deterding, 2009).

Zimmerman defines games as narrative systems with explicit interactivity. Although games demand players to follow rules that constrain their behavior, "When the rules set in motion – play emerges. Rules are fixed, play is free" (Zimmerman, 2004, p. 161). Both Zimmerman and Deterding point out the symbolic nature of games. In games, the players voluntarily engage in interactive activity, enacting an artificial conflict that ends in a quantifiable outcome (Zimmerman, 2004). Even abstract games are always representative of some other activity. One of the oldest board games, Senet, which originated in Egypt, depicts the journey of the soul through the underworld (Deterding, 2009). In both fiction

and play, make-believe prompts and organizes the players' shared imagination (Walton, 1990).

Might games' affordance of interactivity and play enhance fictional, dramatic narrative by allowing the player to engage with the story more intimately, from the first person perspective? The promise of complete immersion had always been the biggest draw to the interactive storytelling creators: Erasing the separation between story and reader/viewer is the "Holy Grail of New Media" (Ryan, 2009, p. 44). Full realization of this goal, however, still eludes us.

At this point in the development of interactive narrative, specific issues have become apparent as game and narrative structures are merging closer together. Ken Perlin, a founding director of the Media Research Lab at NYU, and the Director of the Games for Learning Institute, highlights a few areas where the inclusion of interactivity diminishes narrative experience. Complex, compelling characters are at the center of any dramatic narrative. It is through relating to them and identifying with them that we are taken on the journey of a true emotional experience. In games, the character is simply a vehicle for the player to achieve his or her goal, which is to win or to complete a skill-based task. Lack of personality in game-based characters prevents us from sustaining a dramatic illusion. To the players, the characters feel neither real nor compelling (Perlin, 2004).

When reading a fictional story, we recreate the characters and events in our imagination. When engaging with visual storytelling, such as film or TV, the

psychological suspension of disbelief results from a successful combination of writing, directing and acting. In games, the narrative structure is expressed in such a way that acting is non-existent (Perlin, 2004). Until the game characters are believable and compelling enough, players will not invest in or care about them. Perlin lists the qualities he attributes to convincing, emotionally compelling characters as: situationally appropriate body language, facial expression, rhythm of conversational response, varied modes of conveying focus and attention among actors, and physical manifestations of internal emotional states (Perlin, 2004). Mateas adds that the characters have to be rich enough so the player can understand their thoughts (Mateas, 2010). For that, the game avatars have to be approached as characters in the drama; they need an inner rationale, to represent an archetypal psychological behavior, and to manifest their inner states physically. This leap, it seems clear, will represent the next step in game design, one requiring the involvement of dramaturges, psychologists and directors with experience working with live actors.

The other challenging area in creating an interactive narrative is at the intersection of the plot structure, dramatic arc and players' agency. Players experience agency when their choices are motivated by dramatic probability in the plot (formal cause), and their actions originate from the levels of spectacle, pattern, language and thought (material cause). If there is no balance between those two affordances then the feeling of agency is diminished (Mateas, 2010). A good example of this would be some puzzle-based adventures that offer many

things with which to engage, but no sense of why one action would be preferable to another. Mateas concludes that in order to create a total experience, the interactive story-world must offer a possibility of agency and transformation, support first-person engagement and third-person reflection, and provide the properties of traditional drama, such as enactment, intensity, catharsis, unity and closure. Believable computer controlled characters with rich personalities and emotions must be developed and the plot must build on tensions within their relationships (trust, betrayal, infidelity, self-deception) (Mateas, 2010).

The best examples of a perfectly integrated, interactive experience are described in science fiction. Both Neal Stephenson's *The Diamond Age* and *Star Trek: the Next Generation's* Holodeck allow for a fully immersive, computer generated, three-dimensional simulation of a fictional (or historical) world, which organically and coherently responds to the user no matter what the user says or does. It integrates the user's input into the narrative arc and adjusts the arc to sustain his or her interest. Unfortunately, we are still far away from that becoming a reality. It would require an artificial intelligence vastly beyond the capabilities of existing technologies to create such an intelligently responsive environment, capable of independent creativity (Ryan, 2004).

The current state of development in the area of interactive, computer-mediated dramatic narrative offers challenging questions and rich possibilities. There is room for experimentation and opportunities for innovation. The medium is new and full of possibilities; considering the continuing speed of technological

and scientific development, it is likely that we are at the beginning of an unimaginable, incredibly exciting journey.

2.6 Interactive Digital Narrative (IDN)

In this section I investigate Interactive Digital Narrative as a new medium for storytelling and review the emerging theoretical framework that defines it.

The development of digital media as a new frontier in art and entertainment attracted a diverse group of creators from multidisciplinary fields. Researchers and practitioners from humanities-based, design and computational backgrounds engaged in development of the innovative field, which could adapt our narrative need to the newly available computer affordances. This field, still in its infancy, is as yet formally unnamed. Interactive Digital Narrative is one of the names in the running, but so are Interactive Drama, Interactive Storytelling, Narrative Games and Intelligent Narrative Technologies. I will adopt Interactive Digital Narrative (IDN) in this paper to describe the field which deals with creating and designing environments that let users experience a narrative by participating in it (Koenitz, 2010).

Narrative theories that derive from literary works do not account for the agency and participation of a user as part of a human-computer interaction that helps define the narrative. Aristotelian fixed plot structure does not accommodate

the flexibility and changeability of interactive storytelling. A new framework has to be defined to underpin this emerging narrative model. Traditionally dominant, the role of the author must give way to the poststructuralist ideas of narrative, free of direct authorial control and open to interpretation (Koenitz, 2010).

Umberto Eco in "Opera Aperta" (1989) brings forth the idea of "works in motion," describing the type of work in which the artist leaves the arrangement of some of the parts to the public or to chance, thus allowing for the multiplicity of possible orders. Eco defines classical arts as essentially unambiguous, devised to channel audience's responses into a particular direction. Modern art, in many instances, is deliberately ambiguous, accommodating a great variety of possible meanings (Eco, 1989).

Augmenting narrative theory with cognitive science, David Herman (2009) describes the nature of narrative as a flexible cognitive frame for "constructing, communicating, and reconstructing mentally projected worlds" (as cited in Koenitz, 2010). Herman's concepts give a direction towards more adequate narrative model for the creation of Interactive Digital Narrative. Henry Jenkins (2004), defines four possible models for the integration of interactivity and narrative: Evocative, enacted, embedded and emergent. He elaborates:

> "The evocative mode describes narratives that reference prior stories in other media….Enacted narratives allow the user to act out specific roles within an existing narrative universe….Embedded narratives convey information by means of spatially distributed narrative-infused encounters, as exemplified in the game Myst….Emergent narratives appear in unstructured but rule-based game worlds like The Sims, that provide players with the tools to construct their own world" (as cited in Koenitz, H. Ferri, G. Haahr, M. Sezen, D. Sezen, 2015, p. 95-96).

However, argues Koenitz, those models still have a traditional narrative at their center. Koenitz insists that Interactive Digital Narrative has to have interactivity as a central principal, with participatory nature and computer system affordances as the primal constituent elements. The resulting medium becomes "an expressive narrative form in digital media implemented as a computational system containing potential narratives and experienced through a participatory process that results in products representing instantiated narratives" (Koenitz, 2010). Nick Montfort acknowledges IDN potential to output narrative, but states that "a work of IF (Interactive Fiction) is not itself a narrative; it is an interactive computer program" (Montfort, 2003).

Experimentations in the area of IDN could be divided into three different streams: text-based; cinematic/performative and ludic - spontaneously playful/experimental (Koenitz, H. Ferri, G. Haahr, M. Sezen, D. Sezen, 2015). Text-based and cinematic interactive narrative are most relevant to this research paper. The first examples of text-based narrative could be traced back to *Eliza*, a computer program simulating a therapist, created by Joseph Weizenbaum in 1966. It provided response to the user by analyzing and pattern matching user's textual input. This was a first successful attempt to combine procedural capabilities expressed by the algorithm guiding Eliza's responses with user agency through natural language input (Koenitz, H. Ferri, G. Haahr, M. Sezen, D. Sezen, 2015). The benchmarks in the development of text-based interactive narrative included

the 1976 game *Adventure* (Crowther, 1976), *Zork I* (Blank and Lebling, 1980), and Michael Joyce's *Afternoon, A Story* (1991).

Creators of interactive, text-based narratives use the principals of segmentation and linking, to produce story segments, or lexias. Those segments are connected with hyperlinks. The viewers move through the story selecting different links to see new lexias or return to review the previous ones. The meaning is constructed depending on which lexias the viewer comes across and the order of the segments.

Despite a decade of exciting breakthroughs and experimentation in the 1990s, interactive fiction fell into relative obscurity in the early 2000s. The authoring tools were too complex and required content creators who were able to generate code as well as write compelling, narrative. Such demands produced few possible candidates. Most traditional authors could not engage in exploration of the new field due to their lack of programming skills. Recently, though, there has been a revival of interest in interactive fiction with a few new high power projects resulting. One of them, *Versu*, a project in development by Linden Labs, the developer of Second Life, is a platform offering simpler authoring tools to traditional authors interested in developing interactive fiction.

Interactive cinema is another example of IDN. The most common form it takes is a cinematic narrative unfolding according to the audience's choices to follow one or another branch. Although it could be dated back to Radúz Činčera's Kinoatomat, exhibited at the Montreal World Fair (1967), the real interactive

cinematic experience only became possible much later, with the introduction of laser disc system. One of the early examples was *Aspen Moviemap*, created at MIT in 1978. The interactor was able to direct the visual story by clicking on the points of interest and accessing additional material. MIT Media Lab was the first place to systematically use interactivity in cinematic context, calling the resulting projects "polylinear storytelling" or "reconfigurable video" (Hales, 2015). Interactive cinematic storytelling has been used in installations, TV broadcasts and films. Although in some cases of televisual experience, the interactor was able to make choices using a TV remote control, there were a number of other unusual or intuitive interfaces being used, including touchscreen, optical guns and joysticks. As with interactive fiction, there was a decrease of interest in interactive cinema in early 2000, with renewed interest picking up with the proliferation of Internet use. The evolution of authoring tools and the significant drop in prices of video equipment opened up possibilities for experimentation to a larger group of creators. Small, personal cinematic works based on autobiographical experience became common. The release of the Korsakov authoring system in 2000 was instrumental in the rise of nonfictional interactive content (Hales, 2015). The open source software was developed by the German artist Florian Thalhofer and required no programing skills. The software uses video databases, keywords and algorithmic control to organize media elements. Lev Manovich, Marsha Kinder and others developed a body of database-driven cinematic content. Manovich defines interactive narrative as, "the sum of multiple trajectories through a

database" (Manovich, 1999, p. 6). Koenitz calls it "a walkthrough" (Koenitz, H. Ferri, G. Haahr, M. Sezen, D. Sezen, 2015, p. 98).

As bandwidth became available and technology came of age, interactive cinematic content took multiple forms. Annotated YouTube music videos, interactive web documentary, Arduino-based physical controllers, biofeedback data, use of Kinect, mobile devices, texting, phone calling, voting and the use of Twitter, among many others (Hales, 2015).

However, despite technological advances, some believe the same problems plague interactive cinematic media: a dearth of sophisticated, compelling content, believable characters and immersive, narrative experiences wherein the interactivity enhances, rather than fractures, the storytelling. *Seeker Number 1* attempts to address those problems by combining digital interactivity and live performance into one online experience, and by experimenting with interactivity and meaning making forms in order to create an emotional connection between the audience and the performers. In section IV, dedicated to the authoring process, I discuss the methods used in my research and creative processes, and present my findings.

CHAPTER III - RESEARCH METHODOLOGY

This thesis project, in its essence, is an experimental design research project, applying Design Research and Reflective Practice as the primary research methods.

The main intention of my project is to investigate the effects of including live performance into an online interactive narrative. My inquiry is focused on exploring the possibility of transferring such live performance properties as aura and presence through the live broadcast to the screen presence of performers. I am also investigating the use, purpose and possible forms of audience interaction in such a performance, and how to create a narrative structure that can support this interactivity while maintaining its dramatic integrity. Birger Sevaldson (2010) describes Research by Design as a practice where knowledge is generated by the act of designing, as the design process naturally lends itself to investigation, exploration and innovation, all of which contribute to knowledge generating. Furthermore, my theatrical practice is situated in an experimental area, where the intention is not to produce a commercially viable product, but to "provoke change and iterative imaginative steps forward" (Sevaldson, 2010, p. 20). My approach is a "wicked problem" (H. W. Rittel & Webber, 1973, p. 161) approach, where the subject of exploration is undetermined, waiting to be made specific and concrete (Buchanan, 1992). One of the ten properties of wicked problems, as defined by Rittel in 1972, is that "wicked problems have no definite formulation, but every

formulation of a wicked problem corresponds to a formulation of a solution" (as cited in Buchanan, 1992, p. 97). This method works well with the questions of liveness and interactivity as they exist within the problems and issues of specific circumstances and could be defined as quasi-subject matter. "The quasi-subject matter is an indeterminate subject, waiting to be made specific and concrete" (Margolin, 1995, p. 16). As my process of working on *Seeker Number 1* demonstrates, the exploration and decision making are most productive when the problem itself is positioned and repositioned in an intuitive way, according to the change in discussion or circumstances. Sevaldson describes the design process as often having elements of not-knowing and of the post-rational. This is echoed by Schön who calls the practice as "system of knowing–in–practice" which comes from immersion in the context of the work, tacit knowing and seeing and doing, as well as artistry, "drawing upon a repertoire of previous situations that had been successfully tackled in a certain manner" (as cited by Bowen, Dearden, & Dexter, 2014, p. 7).

My design research process included making sketches, mind maps, mood boards, and paper prototyping, as well as developing and adopting working principles and frames which inspired creativity and provided direction. Contextual immersion in the literary material of the Odyssey and research into examples of Interactive Digital Narrative supported the design research process.

As a part of my research method I will use reflective practice to situate my inquiry in the context of my artistic practice. Executed through journaling on

Tumblr[1], audio recording of brainstorming sessions, and reflective interviews on the design process, reflective practice allows me to analyze and verbalize my internal, artistic process with the purpose of making it available to others. Described as a reflection alongside the practice, this research method allows the *why* of the design process to become visible (Bowen et al., 2014).

[1] Tumbler blog https://www.tumblr.com/blog/seekernumber1

CHAPTER IV - RESEARCH DESIGN

In this section, I present my research design process: How I became involved in this conversation, what my contribution is, how the theory is evolving, and what I learned from previous, successful work. For the study of precedents relevant to my exploration, I examine two recent projects in which I participated: *My One Demand* and *Deception.* I take a deeper look at my own involvement: what was the construction of the projects, my role and my experience. I also reflect in detail on my creative process and its components: bodystorming with my troop, recording, journaling, designing and prototyping the interactivity.

4.1 Precedent Study - *My One Demand*

In June 2015 I participated in a presentation at Toronto's Luminato Festival in June 2015 of *My One Demand*, an interactive, live film created by Blast Theory, an experimental artists' group from Brighton, UK, renowned for their groundbreaking work in the field of performance, interactive media and technology. The project was a part of Live Transmission, a collaborative project between The Patching Zone (NL), Blast Theory (UK), Translocal (FI) and Ontario College of Art and Design University (OCAD U), (CA), with the support of the Culture Programme of the European Union.

Figure 3, *My One Demand*, Luminato, The Globe and Mail, Toronto (Sherwood, 2015)

The film was shot in a single continuous tracking shot and streamed live online and broadcasted to the Bell Lightbox Cinema. While watching, the audience was able to interact with a narrator in real time using their mobile devices in the cinema or their computers at home. The narrator's voice was streamed live from a studio at the control center, where all the footage was mixed using live broadcasting software.

Figure 4, *My One Demand*, Luminato, The Globe and Mail, Toronto (Sherwood, 2015)

The project explored the subjects of unrequited love, alienation, and cities as all-consuming environments as components of a theme of people, things, and places that go on unaware of the world around them, indifferent to the struggle of the fragile lives they touch. Matt Adams, one of the project's directors, said in a Globe and Mail article (2015), that "Occupy Toronto," a social justice happening in the city in 2011, was one of the inspirations for the story.

> "The unrequited love is designed to draw you from a traditional understanding of – well, we all have those romances, the people who got away – to a broader set of feelings that are not requited in other ways… Speaking very personally, that is the history since the financial crisis – where, even for someone who was relatively jaded and cynical about the world, I thought it was only a question of what level of massive political change there would be. The idea that there would be no political change never occurred to me. The idea that there would be a marked shift to the right, and that it would be the poor's fault, was something that I just did not foresee. I just could not believe that that would be the way the conversation would go."

The performance revolved mostly around the liveness of the experience, with the interactivity being of secondary concern and minimal impact. The story followed seven people as they travelled across Toronto, encountering each other for a few, brief moments. The most harrowing, energy-consuming task was following seven actors, one after another, in one continuous shot for nearly two hours; on top of dealing with the issues of transmitting and broadcasting. The control center, which was set at OCAD University, 235 Richmond St. West, served middle man functions: receiving transmitted footage, repackaging it using Wirecast broadcasting platform; broadcasting it on line and to the Bell Lightbox Cinema; and inserting the narrator's commentary. The narrator was located in the sound booth at the control center and was watching on the monitor as the dramatic footage unfolded.

The narrative structure was arranged around reminiscences of the narrator, who was the common contact among all of the characters. She commented on her life and the characters as the story unfolded. The characters were heard in voice overs, telling personal stories based on the actors' actual experiences. When they interacted on camera, they followed the written script. All the text was developed in collaboration with the actors. The story metaphorically followed a man's life from cradle to an old age, starting with the baby, just born, being taken by his mother home from Toronto General Hospital, and ending with a man in his sixties, hard on his luck, living in a make-shift shelter somewhere around Leslie Spit. The city was presented as another actor in the drama, revealing its gritty,

unpolished side. Filming in the soft light of the "Golden Hour" added a magical quality to the otherwise simple visual language.

Audience agency was controlled by the narrator's questions, which she posed to the audience throughout the performance. Audience members at the theatre were able to answer on their mobile devices. Those following the performance from home could respond via their computers. The questions were sometimes personal and sometimes philosophical. The narrator shared some of the answers and commented briefly on them in her narration as the story kept unfolding. More answers appeared as text streaming after the closing credits.

I was the control room's runner, which meant that I reviewed the streaming footage for glitches and reporting them as they appeared to the control crew, including the live editor and members of the creative team. On the last day, I also assisted in the shoot, which was interrupted midway due to stormy weather. The fail-safe, in case of a disruption of the live action, was to use segments of the previous day's footage. The audience was aware of the drama on set, since they saw the storm erupting as it happened and were aware of the conditions on the street.

This project lent itself perfectly to my exploration. It dealt with most of the issues I came across in my research: the liveness in the mediated performance, the narrative structure and audience interaction.

My One Demand used live broadcasted performance to create a feeling of immediacy in viewers when they saw it for the first time. As a viewer, I had

emotional responses to watching actors in real time. While seeing the actors' vulnerabilities seemed to pop their characters off the screen for me, seeing the superficiality in their performances flattened the drama. At times, the combination of a documentary aesthetic and filmic approach appealed to me, and sometimes fell short. The style felt somewhat undecided; it did not commit to either approach: Was this a documentary or an art piece? I felt that the narrator's commentary worked well within the story and that the actors were captivating, adjusting increasingly well to the unusual situation, and offering new subtleties and details every day that the show went on. I found the last sequence most moving; it was timed to happen during the last moments of sunset. The sheer beauty of the desolate port lands and the mesmerizing face of the actor Julian Richings created a feeling of transcendence. This effect seemed not to be a result of the narration, though, but rather, seemed to occur separate from it.

I found the interactive element uninteresting and unnecessary to the drama. Yes, the audience input added another interpretive layer, but instead of effecting changes in the storyline, the input felt parallel and a bit decorative. I was not convinced that it was necessary for the progression of the story, but rather that it was a nice add-on, which gave audience members something to do. The audience had no real agency in the story or true interactivity with the characters. I did not find the live aspect of the project as compelling as I had hoped. It was an interesting, challenging experiment, but in my opinion, it did not rise to the level of a significant exploration of the use of liveness within the digital medium. The

performance quality and shooting style were traditional, not adapted for the innovative format. The narrative structure was predictable and somewhat conservative, although the content and acting made it relatable and affecting. As I reflected on the experience I saw unexplored possibilities on which I can focus my attention:

- How must an actor's performance change in order to change the presence quality during a live televisual event?
- What style of filming can heighten the live, intimate quality of the experience?
- What narrative structure can incorporate interaction that effects changes in the meaning and outcome of the drama?

To conclude, I see *My One Demand* as a valuable, elucidating experiment in incorporating liveness and interactivity to create an affecting cinematic experience. It created a precedent of broadcasting live cinematic storytelling shot in a real environment on a large scale, which can now be examined, critiqued, emulated and improved upon in implementing online interactivity in live events. I used my experience of working on the project as a springboard for my own ideas in designing the interactivity in *Seeker Number 1*.

Figure 5, *My One Demand*, Luminato, The Globe and Mail, Toronto (Sherwood, 2015)

4.2 Precedent Study - *Deception*

Figure 6, *Deception*, YouTube video file (Bolduc-Chiong, Jennings 2015)

Deception, a mobile assisted role-playing game, was created as an internship project for the AntHill Lab in May-July, 2015. An alpha version of *Deception* was presented at the Gladstone Hotel on July 15, 2015. Six players and four facilitators participated in the three hour event that included role-playing, group work, exploration of the hotel, puzzles, elements of mystery, and a concluding dinner with discussion. Facilitators interacted with the players through the messaging app throughout the event. Visual and textual information was accessible through another mobile app. Physical objects containing additional information (photographs, letters) were discovered as players solved the puzzles.

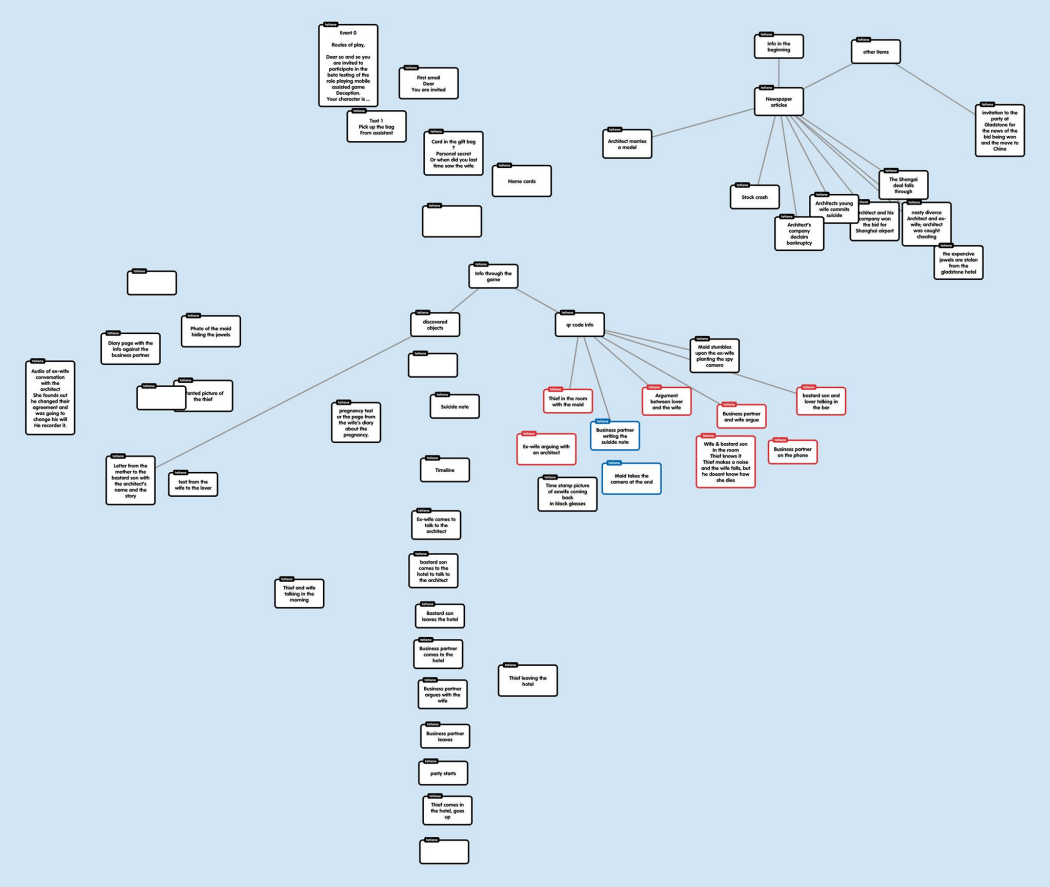


Figure 7, *Deception*, narrative structure (Jennings, 2015). Our team used Popplet, a mind-mapping software, to create a storyboard and map out live event.

The goal of the game was to engage players physically, emotionally and socially, creating a satisfying and absorbing experience. The format of *Deception* was inspired by live action role-playing (LARP) games, room escape games and immersive theatre.

Figure 8, *Deception*, Gladstone Hotel (Jennings, 2015)

The analysis of creative process and players' experience of *Deception* is highly relevant to the subject of my thesis *Seeker Number 1,* an exploration of computer assisted, live/online interactive narrative. The experience of participating in the creation of game narrative for *Deception* influenced my views on the nature of interactive narrative as it relates to this thesis.

Figure 9-10, *Deception*, Gladstone Hotel (Jennings 2015)

My role in *Deception* was as a content creator and team manager. I worked with my teammates Saffron Bolduc-Chiong, Daniel Jones and Glen Zhang on structuring of the experience and developing of the narrative. The game went through two significantly different iterations and presentations as our ideas evolved. The initial task was to create a live, mobile-assisted game that could be played locally. The creative process involved research, brainstorming and quick prototyping with the feedback from the users. An app was developed to allow users to receive information, interact through text messages with the game master, scan QR codes, and access video and audio files.

The main effort went into developing the story, characters and puzzle artifacts. The selection of the Gladstone Hotel was essential to the success of the experience, since the complex layout and atmospheric setting added necessary elements to the game's immersive nature. As I reflect on the experience, I would

like to address two instances within *Deception's* development and presentation, which seem to be relevant to my own investigation into creation of interactive narrative.

During our final presentation of the game at the Gladstone, three team members, including me, acted as Human Computers, to provide a substitute for the missing parts of our application. The initial idea was that we would write a dialogue-generating program using pre-written bits of text to give the players directions and produce a semblance of live communication. So, in order to mimic that, each of us connected to two of the players through the app and were exchanging texts with them while remaining in character. In retrospect, that was the most interesting part of the experience. The exchanges quickly became very personal and lively; they generated the sense of connection and a through line for the players as they reported in their feedback. They felt personally acknowledged and involved. This personal, live connection, assisted by digital means, added a human touch to the game experience that was not initially designed into it. My initial decision to use live interaction with the narrator in *Seeker Number 1* originated from that serendipitous experience.

The second relevant insight was that creation of the narrative had to be rich with detail and open to being effected by interaction. As we were developing the story elements and characters, it became clear that much more detail is needed in order to generate a believably immersive experience and to anticipate turns of events. The large amount of character detail and number of visual assets created

to support the story were instrumental in the success of the experience. The final part of the experience was a communal dinner, at which the players finalized their investigation and voted on who the murderer was.

The feedback from the players identified areas that needed further improvement:

1. Despite receiving what the team considered a large volume of information and detail on the characters' circumstances and psychological types, the players wanted to know more about their characters' intentions within the game and with other players.
2. Interactions could be streamlined even further, though the accidental live chat feature had to remain in the final iteration. Regarding this, new ideas started to arise, such as having two groups of players participating: one group playing on line with more access to information, collaborating with the players who are live in the space.

The experience of working on *Deception* provided me with invaluable insight into modes, issues and opportunities of interactivity within role-playing scenarios, along with skills in developing and executing them. I was able to apply all I learned in solving problems of combining elements of play with narrative, structuring the elements of the story for interactivity, and engaging players with real-time interaction during the experience to creating *Seeker Number 1*.

Overall, my participation in both *Deception* and *My One Demand* were instrumental to my choice of liveness as a central theme of my hypothesis and to the design choices I made in developing this project.

CHAPTER V - AUTHORING PROCESS

This section is dedicated to the authoring process in the creation of *Seeker Number 1*, an interactive digital narrative, which combines live performance, online audience participation and computer procedural capabilities. I describe herein all the stages and elements of the project including: paper prototyping; rehearsals with my theatre company, Kadozuke Kollektif; narrative creation; user interface design; development of the interactive model; set and visuals design; technology use; rehearsal techniques and methodology; and use of narrative theory and performance in creating open-ended narrative structures.

The discussion that follows is organized into these sections:

- Bodystorming with my troop
    a. Brainstorming with members of the collective
    b. Compositional improvisation
    c. Prototyping interactivity, mobile cinematography and broadcasting methods.

- Narrative Design
    a. Storyboarding
    b. Character Development
    c. Visual style and set design development

- Reflecting
    a. Diary of reflections on Tumblr
    b. Recorded discussions with created team
    c. Sketches, mindmaps

Figures 11 - 12, *Seeker Number 1*, rehearsal, Zuke Studio (Jennings, 2015)

5.1 Bodystorming with Members of Kadozuke Kollektif

A group of Humber College Theatre Performance program graduates and I formed Kadozuke Kollektif in 2004. I am the artistic director of the company. As an experimental performance group, we had worked for eleven years developing our own creation and training methodology, producing shows, workshops and installation performances. One of the techniques in our development process is called compositional improvisation, a rehearsal technique exercised by a group that develops non-verbal awareness of and connection to themes within the material. Non-verbal awareness in performance is an awareness of physical manifestations of emotional changes in the improvisation. It facilitates synchronisation of actions amongst members of the group without relying on verbal discussion. Compositional improvisation is also an excellent means of developing strong creative skills and coherence within an ensemble.

In the beginning of each session, the topic or a theme is discussed. The conversation is open-ended, with no demands made that the subject of investigation to be present in the resulting improvisation. For example, conversation can include topics such as: How one can define a sense of home? What is nostalgia? What kind of memories are associated with the sense of belonging? What is the psychological cost of being displaced or culturally cut off?

The improvisation starts with actors divided into two groups going to opposite walls and, letting go of predetermined ideas of what they want to

execute, attempting to stay in the moment by purely responding to what happens in front of them. The space between the groups is the performance space while the walls are the safe space, a construct that establishes performance as an essentially risky, high-stakes activity. As the actors prepare mentally to engage and heighten both their energies and their vulnerability, one will eventually take the first leap into the performance space and offer an action. While first action is anything the first actor chooses to do, every following action is a response to what has already happened. As the first moment happens, actors assess the changes in the space and the resulting changes in the performance atmosphere and tension. Available choices keep being re-defined by the patterns formed by actions already taken within the performance space. Actors' creativity is not in having endless variety of choices, but in understanding different structural components and using them in creative ways. Each layered action further clarifies the direction being taken and suggests what may be needed to make the emerging performance successful. The entering actors watch for markers, or cues, of rhythm, different structural patterns, shifts, visual focus, layers, emotional buildup, and thematic significance. The performance theme is not pre-determined, but rather emerges along with the improvisation. Such type of improvisation requires a very high coherence among ensemble members. When the actors work together in that way for many years, they develop a kind of a collective sixth sense that allows them to exercise a very high level of nonverbal communication and anticipation of each other's actions.

The goal of compositional improvisation is not to come up with the scenes, but to discover – and uncover for the audience – a territory rich with meaning, possibility and playfulness. That territory is carved out of the subject matter the company is discussing, questions it is asking and the presence of the ensemble in a particular place and time. The improvisations are followed by detailed debriefs, when the company and I discuss the round's structure, subject matter and execution. Months of this sort of exploration may be needed before the company experiences a sense of urgency to start forming the final material. The resulting work never aims to present an answer to a specific question, but rather to share an imprint of the journey we made by asking the question over and over again.

Our work on *Seeker Number 1* started with exploration of the nature of the company's performance for a camera vs. in-person, live performance. We focused our investigation on discovering a different quality of actor's presence, fine-tuned specifically for the conditions of being transmitted live to an online audience.

The span of the Odyssey covers 20 years of Odysseus's travels. As we explored the events of the book and discussed various themes, we noticed that in our compositional improvisations, the actors repeatedly gravitated to the last part of the book, where Odysseus finally comes home. Acknowledging this trend during the debriefs, the company and I further narrowed the time-space addressed in the performance, limiting further investigation to the house of Odysseus and Penelope on Ithaca, where Penelope has been living with her son and a group of

suitors for the past 20 years. This allowed us to define the main theme of our investigation as “The Return.” The quote we chose to further clarify the theme and signify the thematic metaphor was attributed to Heraclitus: “No man ever steps in the same river twice, for it's not the same river and he's not the same man” (Plato, 2015). Within this theme, we explored subjects of: *leaving as an escape*; *waiting as a permanent state; home as a utopia; and the return as an illusion*. Once Odysseus leaves home for Troy he can never return; the events postponing his trip back are the self-inflicted delaying tactics that allow him to remain in the adventure/journey territory rather than face the reality of his loss and separation.

Our initial idea was to start the story with Odysseus coming back to the house he does not recognize, a woman he does not remember, and the people he never met who now populate his former realm. His son, whom he left behind as a baby, is nowhere to be seen and Odysseus starts doubting that the boy ever existed or is, perhaps, a figment of his imagination. Later on in the process of developing the storyline, though, we realized that, in order to create a stronger exposition, our narrative needed to reach back before the moment of Odysseus’s return. Our final version begins on the day our hero leaves home to go to war. Extending the story so far back in time allowed us to set up the characters and their relationships in a very specific way.

We infused the story with contemporary sensibilities and complex relationships in order to provide the audience with relatable and compelling characters. Odysseus is not just leaving to go to war, he is running away from the

stress of his home life and the deterioration of his marriage after the death of his youngest child. This interpretation arose from our improvisational process and brainstorming sessions. Our goal of building our unique narrative on a foundation of this classical text resulted in original material developed and designed in an organic, collaborative manner, using research design and iterative reflections on our creative process.

5.2 Filming

The designation of the final production as an online, interactive experience demanded that we develop a new rehearsal practice that would allow us to work with the cameras and online interactivity instead of an in-person, live audience. With this in mind, we build a mock-up set to mimic the multi-camera film set we would ultimately use. The first experiments with the space resulted in a turn-table, cyclical, three-room construction where actors and videographers were able to move around the central column.

The visual goal was to have a layered action in one frame, where all three spaces were somewhat visible through multiple openings between the wall dividers. Two cameras were situated in a fixed position in each of the rooms while the third camera was operated by the moving cameraperson. Each of the cameras was connected to a monitor through HDMI cable so that I could watch footage

from all three simultaneously. Various set-ups were tried out using phone cameras, DSLRs and camcorders. Resulting footage was reviewed with the actors at the end of each rehearsal.

At first, the main purpose of the setup was to accustom the actors to the unusual organization of the space, where performance was directed not towards ta live audience in one directions, but toward the multiple spaces captured by the cameras, with greatest attention given to framing shots and choosing camera angles. The nature of our improvisations changed with the realization that close-up moments, hardly noticeable by a live audience, could produce powerful images when picked up by a camera.

The experimentation with the multiple monitors allowed for the first prototypes of the user interface. This stage of the experimentation continued from the beginning of September to the end of November.

The next round of experimentation involved prototyping various setups of the performance space in order to determine camera positions, focal length of the lenses and number of scenes in the final performance. The main challenge of this stage was in varying the look and emotional impact of different camera framings. Close-ups worked well in capturing the actors' presence and emotional states, but did not capture the physicality company wanted to explore. They were also visually limiting. Wide shots were more difficult to set up in our set's space and camera configuration; we found it challenging to light them well and make them visually compelling. At the end of this stage, we selected four setups, including

one close-up, two wide angle shots and one medium angle shot. In addition, we included one moving camera controlled by an actor/operator. Having an actor/operator in the performance space allowed us to create moving shots and add additional angles. It also amplified for both the actors and viewers the sensations of immediacy and live action.

The next stage of prototyping included setting up a multi-camera, live streaming app. I experimented with three different apps for OS devices: Google Hangouts; Live-Air Remote and RecoLive MultiCam. RecoLive MultiCam Switcher was used for the first prototype, which we then upgraded to RecoLive MultiCam SwitcherStudio. An iPad and iPhones were used to shoot during this stage of prototyping. The resulting footage was reviewed by the team and used as a base for structuring a final storyboard and shot list. Using the multi-camera app made clear to us the overarching challenge of the project: creating an online experience where liveness is felt as an authentic, emotional quality. The interface and the filmed performance had to accentuate this live quality rather than negating it. It could not conform to the general televisual look and experience. The main effort was invested in developing an original visual and performing language which could make the live quality stand out.

For the final presentation six video cameras were used to broadcast and record the performance. Each room and the corridor were equipped with a stationary camcorder. In addition, a professional Canon camera with wireless transmitter was used by an operator who moved inside the set. Blackmagic ATEM

Live Production Switcher was used for switching between the feeds and streaming. Although various live-streaming services and options were tested: Ustearm, Wirecast, Stage TEN, VLC, Twitch, DaCast – none of those options could provide immediate feedback for interactivity. At the end the performance was streamed using Skype, which provided continues high quality streaming with no latency.

5.3 Narrative Design

My original plan in developing the narrative presentation of this project, was to construct the story from pre-shot footage organized into a database, and have the live element limited to a single narrator. My early focus was on discovering a narrative structure that could offer its audience a coherent and compelling story through recombined database footage, live action and online audience interactivity. My first step was to create visual representations of the different kinds of narrative structures, reflecting a change from a linear closed system to an open structure of the interactive storyworld, where dramatic objects are represented as spaces with clusters of events and multiple possible connections and through lines.

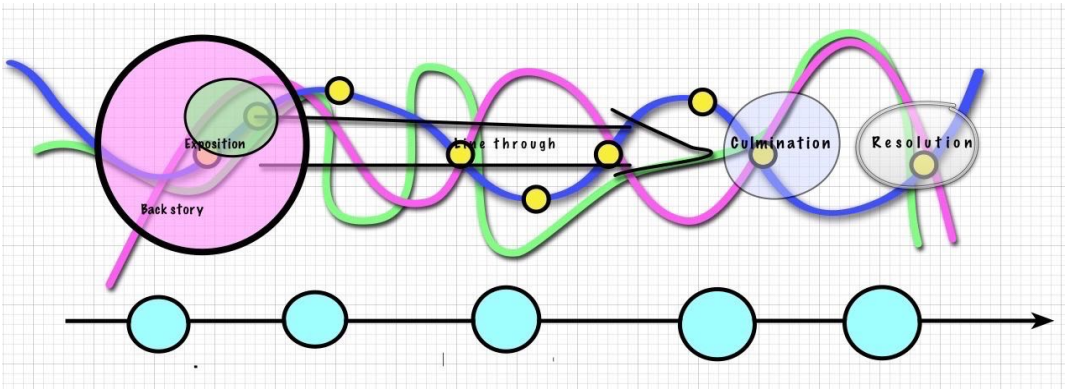


Figure 13, Linear Plot Structure (Jennings, 2015)

"Linear Plot Structure" (Figure 14), is a structural example which could be experienced from different points of view by following 3 different characters. Each character represented as a different color line. Each character's story has its own dynamic with culminations and resolutions expressed as the highest and lowest points on the diagram. All of the three storylines are connected through main events, which are represented by the yellow circles. While some elements could be moved and changed in different scenarios, the main events would have to stay in place in order to provide coherence between stories and ensure sufficient emotional buildup. The story spaces, represented by larger circles include additional information about the story and the characters which could be accessible in digital form.

- exposition: Three characters are being presented; the initial event happens (at the end of exposition); the plot is set up and the lines through begin.
- Build up, culmination: Escalation of the events; additional secondary characters are brought in, the buildup of the conflict, the introduction of

additional information about the characters, and the cumulative event at the end.

- Third act, fall out: After the culmination, resolution of all plot lines. The end could pose a question, present a moral conclusion or be left open-ended.

If the progression of the main events is examined separately, the line through of the play should become obvious. This structure, based on the Aristotelian plot arch, could be considered closed, with the events predetermined and leading into each other.

Pamela Jennings in her article *Narrative Structures for New Media* suggests that traditional African oral narrative structure may serve as a model for organizing computer-based, interactive work. The successive elements of the story are arranged inside convenient frames that allow events with a certain amount of similarity to be described in similar terms (Jennings, 1996). This type of structure allows for the accommodation of multiple choices made at any time by the audience. The narrator can move the story forward by selecting a successive element appropriate for each choice form the corresponding frame. This inspired me to design various visualisations of open narrative structures. I created four sketches, each representing a different version of a nonlinear, flexible plot structure, which could incorporate interactivity. Sketch 1 (Figure 15) visualises the story as a group of frames (trays), each holding a set of events unified by one or more characteristics: they involve one of the characters, the same time frame,

or the same location. The three levels of structure represent the progression of the story. Grouped in this way, the scenes could be remixed on each of the levels, changing the way the story is revealed. The color coding represents the level of tension in each scene. The organizational rule might specify that in order to create a coherent progression, each level has to include at least one of each group of scenes in order to escalate dramatic tension. Some scenes could be defined as switches, scenes that could be used to transition from one level to the next. In this scenario not all the scenes have to be used in order to tell the story; an excess of the material is created in order to produce variations of the story. But important scenes must be identified and included each time. In each case, a choice made by the audience could affect what scene is chosen next and create multiple variations of the story. The complexity in this case is in choosing what type of interactivity is offered. The audience can be offered a choice to follow a character or a set of events.

Sketches two, three and four (Figures 16-18) visualize the organization of the events and their progression in non-linear, dramatic structures: a continuous upward spiral of the events with similarities on each level; multiple levels with scenes organized by unifying principal; and separate spheres containing semi-independent parts of the story that could be mixed and matched.

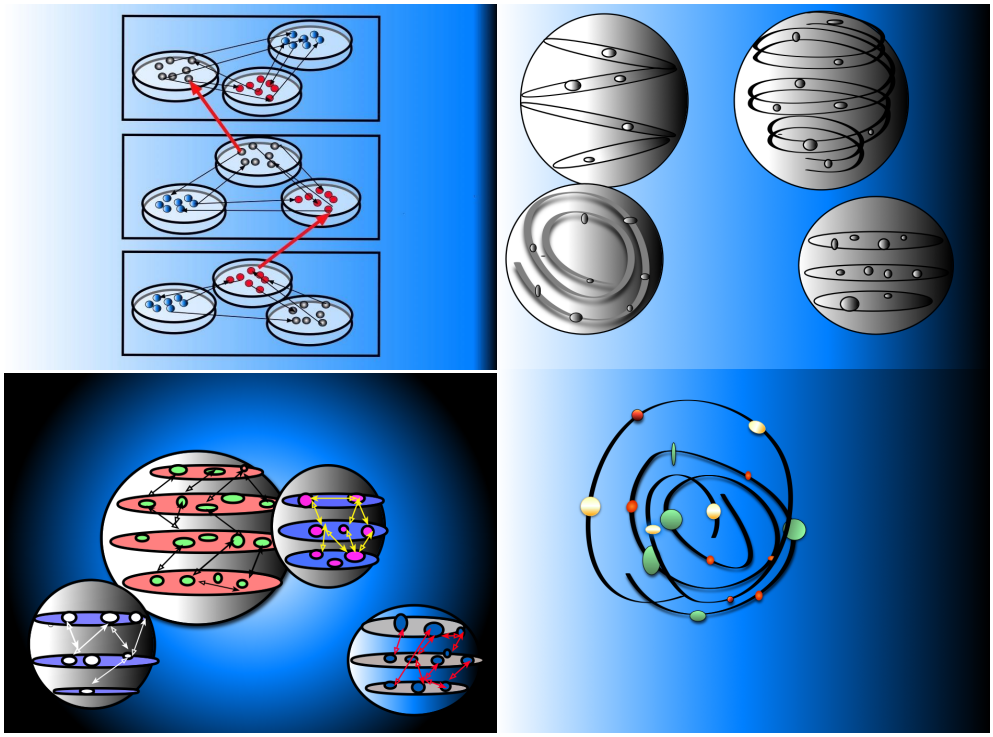


Figure 13 - 17, Non-linear plot structures, (Jennings, 2015)

This exploration into narrative structures led me to clarify the project's main design problem: What connections must be made among story elements in order to provide for flexible and meaningful frames based on elemental similarities while successfully building and then resolving dramatic tensions? Classifying the elements simplistically would result in simplistic, clichéd combinations. Could the story elements be grouped in such a way that invites unexpected and inspired re-combinations?

I then constructed and sketched a few possible scenarios which used a recombination of multiple elements in a coherent and logical way.

One possible scenario was to divide information into even smaller groups, arranged according to themes and characters. Each character had a number of

relevant events and revealing reactions from which to choose. I divided those events even further, into "active," where the character is actively affecting the progression of events, and "receptive," the ones where the character is being affected and changed through the actions of others or occurrences out of his /her control.

Figure 18, Odyssey, character based database (Jennings, 2015)

In Figure 19, above, the scenes are grouped around the characters involved in them; Figure 20 organizes the scenes by location, with specific attention paid to the state of the character Penelope. In this case, the story centers on Penelope and is seen through her eyes. Figure 21 represents a nonlinear storyboard with the events grouped by both location and participating character(s).

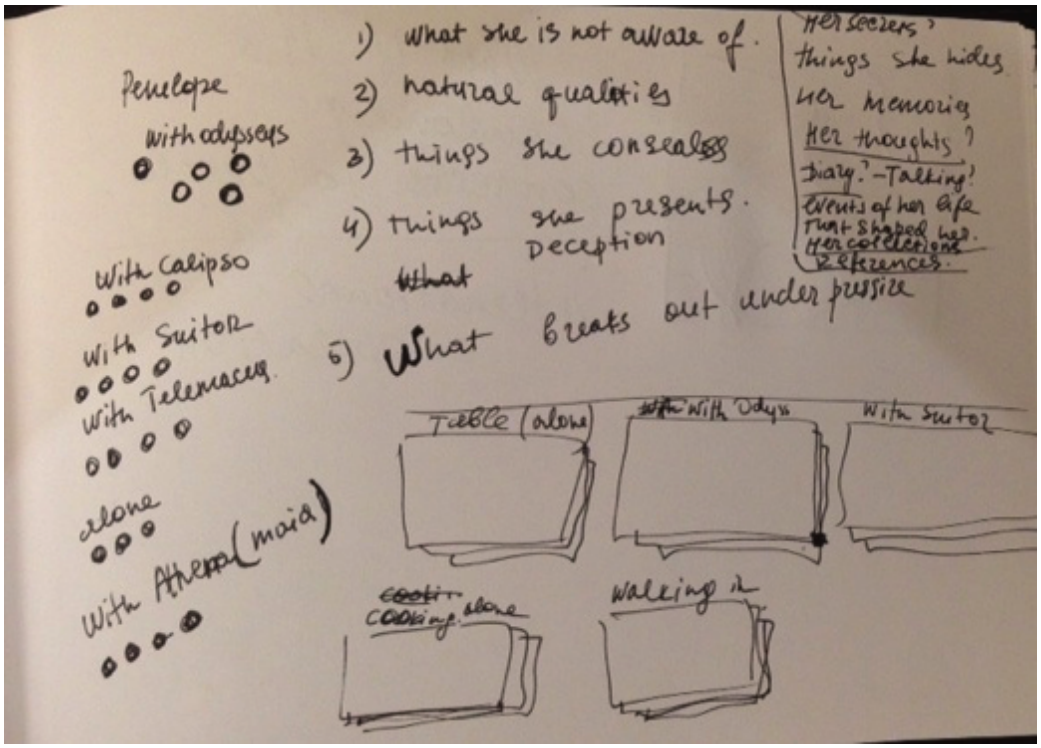


Figure 19, Odyssey, Penelope, scene database, (Jennings, 2015)

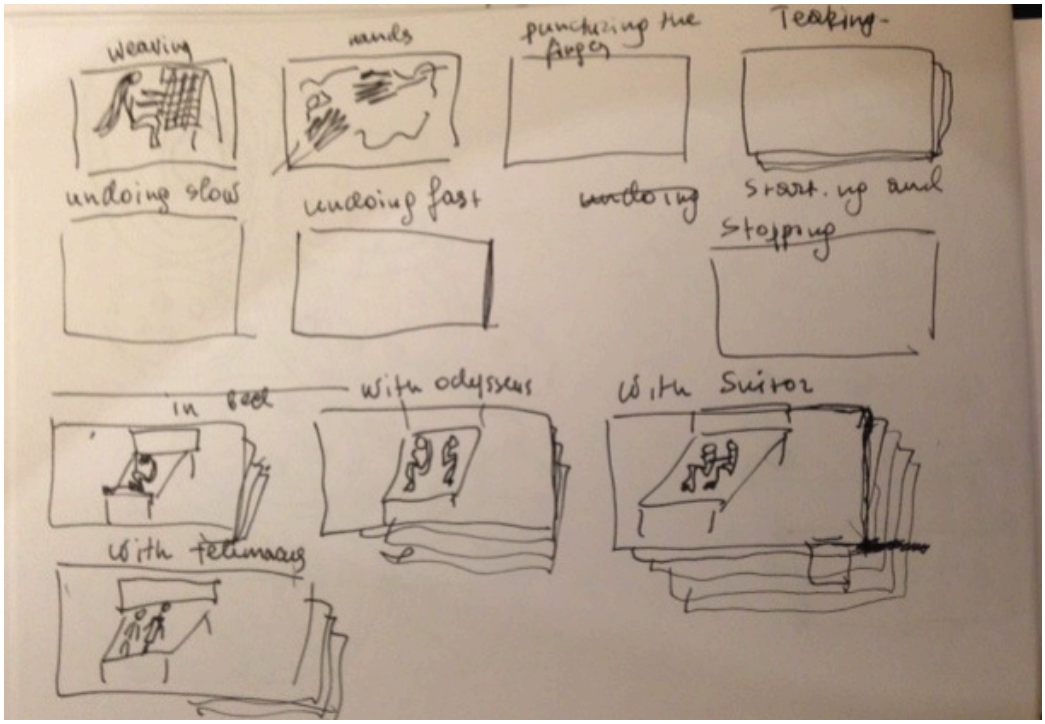


Figure 20, Odyssey, Penelope, image database, (Jennings, 2015)

Characters' personalities, behaviors and reactions were also grouped together according to different markers. For example, physical manifestations of personality were divided further into conscious and unconscious reactions, controlled outputs or un-self-aware behaviors and outbursts of suppressed rage as a result of situational pressure. The data was identified by the location of each event, time of day and the atmosphere (mood of the scene).

I created a group of objects (visual and audio) with the specific purpose of operating as switches for different scenes. A switch is a theatrical device that signals or initiates an abrupt change of tone and direction within one dynamic scene. It might be a part of the play's narrative or an additional physical event created by the director within a specific interpretation, for example, a sudden sound from outside, a baby starting to cry, a gust of wind, or a change of lighting. Anything used to affect the mood and change the direction could be classified as a switch. In this project, selection of one switch over others would lead to specific choices and outcomes in the following scene.

After considerable experimentation and prototyping, we decided on a four streams narrative structure, built around audience agency to change the perspective from which they are watching the story. We designed a specific writing technique in order to construct four parallel lines of narrative that could be accessed interactively. All four storylines unfold simultaneously, and each character can be followed separately. The script was written in multiple vertical

columns in order to time the events of the multiple storylines and chart the location of the characters in each scene.

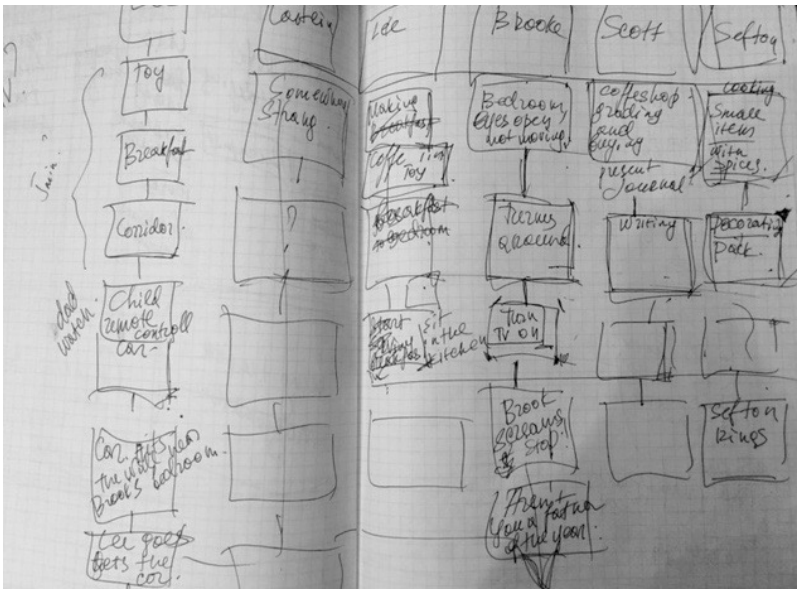


Figure 21, vertical storyboard for multiple characters (Jennings, 2016)

The audience is able to switch among storylines relating to different characters at any moment and continue following the story from their perspective. Meanwhile, the three remaining storylines are being performed, unseen by that viewer. The audience's experience of depth and sense of the story's liveness is meant to be heightened when they understand that the narrative universe continues to evolve, both within and outside of their view.

This decision gave us a strong framework for creating narratives that combine interactivity and live performance. It also addressed my research questions:

- How might the inclusion of live performance affect the creation and experience of interactive digital narrative?

- How might the aura/presence of live performance be re-discovered in post-organic performance?
- How might we establish processes and practices which support the creation of such experiences?

5.4 Character development

As I continued to work on the database-centered model, I devised a psychological attributes selection for characters, similar to many role-playing games' character building method. This part of the project did not end up in the final iteration, though it added insights during brainstorming sessions with actors and supported further development of the characters when the concept progressed to involve a much larger live performance component. (The results of this line of inquiry could be useful in development of a psychological game simulator.)

For identifying the character building components we compared two different formats. One was based on Myers-Briggs personality types and another of my own invention, using the following seven attributes and measuring them by percentage of intensity, 1-100. (The characters need not have only enough of each to add up to 100%.)

1. Empathy
2. Reasoning
3. Social intelligence
4. Emotional intelligence

5. Awareness
6. Imagination
7. Problem solving skills

The hypothesis was that any character could be described using those identifiers. A slight adjustment of those attributes would create a different type of character with different coping and response mechanisms.

For example, Penelope's character could be described as:

1.	Empathy	70%
2.	Reasoning	70%
3.	Social intelligence	90%
4.	Emotional intelligence	75%
5.	Awareness	85%
6.	Imagination	80%
7.	Problem solving skills	85%

While Odysseus could be identified as:

1.	Empathy	30%
2.	Reasoning	95%
3.	Social intelligence	90%
4.	Emotional intelligence	60%
5.	Awareness	55%
6.	Imagination	50%
7.	Problem solving skills	95%

The percentages were designated, albeit imprecisely, during a character analysis session with the actors.

In order to establish a main story arc and to visualize the progression of the events throughout the entire story, I created individual charts of the four main characters' arcs according to the time scale of Odysseus's travels (20 years) and by levels of tension (Figures 22-25). I overlaid all four charts in order to see

where the tension nodes occur and where emotional and situational build up and catharsis could be located.

Time moves differently within the story for different characters. In the first ten years, for instance, not much happens in Ithaca: Penelope is consumed with raising Telemachus and waiting for Odysseus to return from the war with Troy. At the same time, Odysseus is experiencing a strongly dramatic period, packed with events that, while located outside of the story world of the Odyssey, are described in the Iliad.

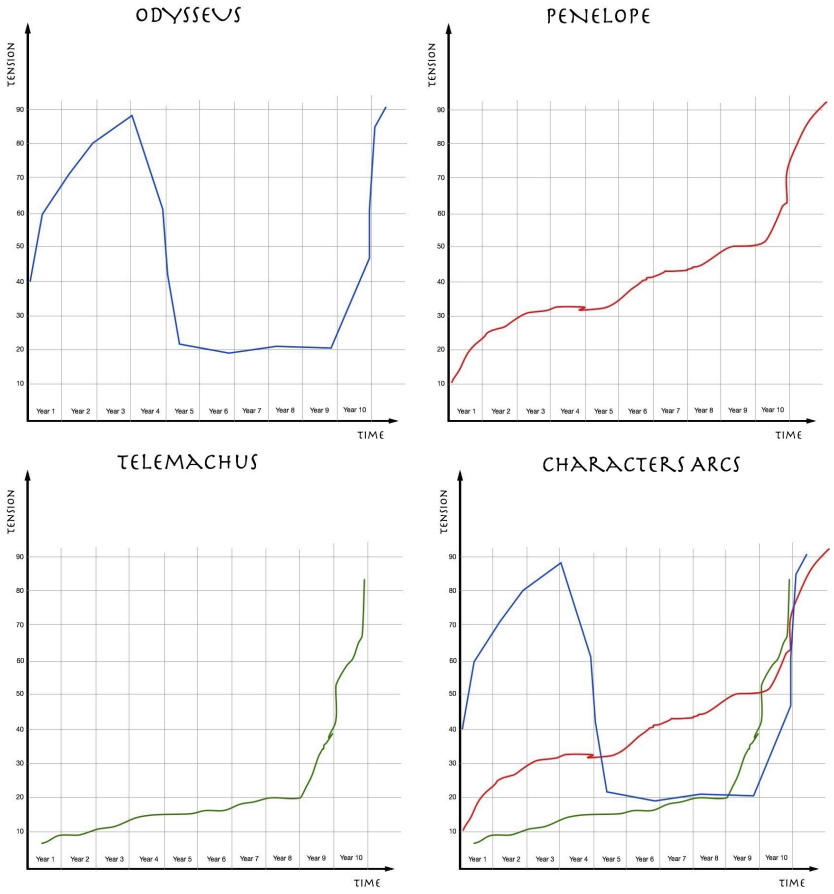


Figure 22 - 25, Characters' arcs (Jennings, 2015)

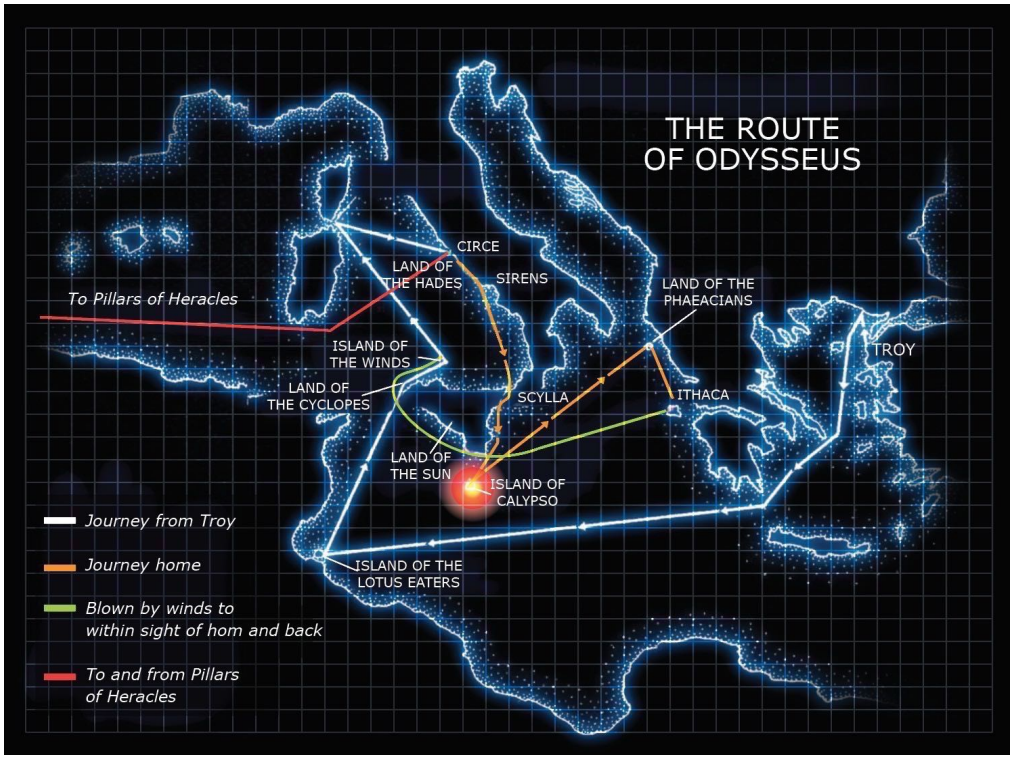
I used only a small fragment of the long narrative arc we developed. By creating an arc longer than we needed, we opened the possibility of evolving the story further in future productions. We planted the seeds in the first episode (which this project would retroactively become) for future development of the story's events and characters. The main overall arc allows for the bird's eye view of the story. Using Aristotelian and open ended narrative structures the inside story could be mapped out through implementation of structural patterns: depending on how many instalments of the story are envisioned – the overall structure, as well as the structure of each of the episodes, have to have an exposition, build up, culmination and resolution. The time scale for each of those parts has to reflect the narrative design objectives. If the intention of the design is to manipulate the audience' expectations by changing the rhythm and timing of the events – it could be reflected in the structure. For example, the exposition can start slowly, giving the sense that the story will be progressing at the slow pace, allowing the audience to be drawn into the events and characters' relationships through exploring rich details of the world. Next, the development of the main conflict could be presented in juxtaposition, suddenly and violently, in order to explode the rhythm and increase the tension. The seeds for this conflict could be planned ahead of time on the narrative arc, so that when the first surprise is passed – the audience can see the logic of the events. In this way the narrative is designed with the view of the whole story, and simultaneously for each of the episodes

separately. This process could also work well for story-telling in interactive digital narrative (IDN) form.

5.5 Environment

Research and design of the project environment has gone through many iterations. The initial idea of a film set with various rooms where different events can happen simultaneously was established in the very beginning of the design process, while the configuration and organization of the space evolved along with the story idea and our exploration of various models of interactivity.

In his article, “Everting the Holodeck, games and Storytelling in Physical Space” (2015), Mads Haahr addresses the importance of giving serious consideration to the *physical space* in which narrative elements are being placed and that the audience happens to inhabit. I started to develop a virtual model for the narrative space by drawing a map where places of the story were represented (Figures 26-28). The map was animated to show at what geographic location the story was taking place, and what scenes and setups corresponded to each part of the story.



Figures 26 - 28, Interactive virtual map design (Jennings, EL-Khateeb, 2015)

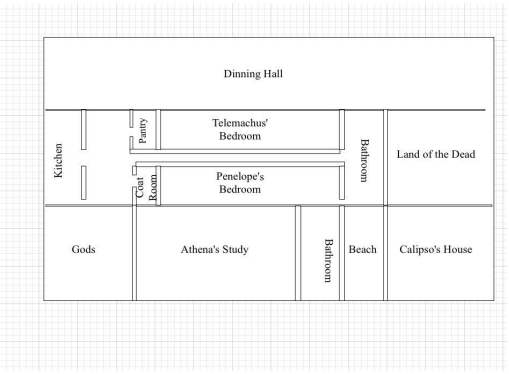
As the time and space occupied by the story narrowed, the design ideas and prototypes reflected that. The idea of the house as a container for the whole world of the Odyssey was defined early in the process. Early iterations represented various environments/locations of the story as rooms in a big, sprawling house. Penelope's bedroom was alongside Calypso's kitchen and the

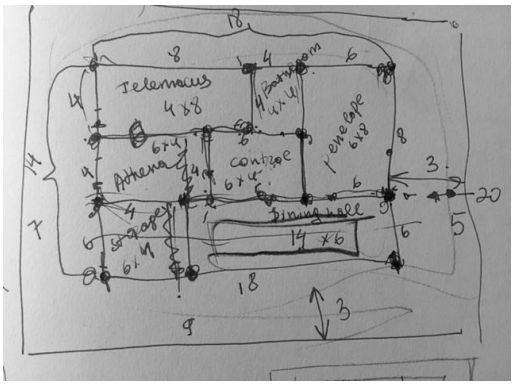
bathroom, between the two, included a water divide representing the sea and beach where the melancholy Odysseus could be found longing for home. The live carp in the bathtub represented Poseidon, and the dark room next to the pantry, the world of the dead. Although some of those ideas were hypothetical and difficult to realize without a significant budget – visualizing the set in that manner allowed me to create a clear physical representation of the world from which to work. We worked with the concept of the house remained throughout all of the design iterations.

Thematically, the house metaphor allowed for multiple interpretations of house: *as a world; as a maze; as a memory depository; as an illusion; as utopia and a nightmare*. Perhaps it is place where a person keeps stumbling on things they are trying to escape, or one where a person can never find what they are looking for. The set and story designs evolved simultaneously and in relation to one another.

Practical considerations in setting up the space as highly transformable, and which would appear larger than in reality, included making clear paths for various camera angles and locating within it a command center from which the footage would be broadcast. Of course, we had to take into account the size and dimensions of the studio space we were using. Since the camera angle in each of the rooms remain fixed, the greater challenge was in creating static frames that were layered, visually compelling, full of interesting details, and that allowed for different scenes and points of visual interest.

The design changed several times. We altered the arrangement of rooms and their positions to reflect updates in and edits of the story (Figures 29-32).





Figures 29 - 30, set design ideas (Jennings, 2015)

The final version included three rooms, dining room, pantry and Penelope's bedroom, divided by a long corridor. Each room had a visual and representational purpose. The visual palette was inspired by Rembrandt's painting, "Samson Tells a Riddle at his Feast", containing dark, rich tones with a golden glow to the lights. The set was constructed from honeycomb boards dressed with selections of wallpaper, with the consideration of building additional rooms in the future if the project went into full production. Set pieces and props were sourced, while costumes were selected from the company's collection.

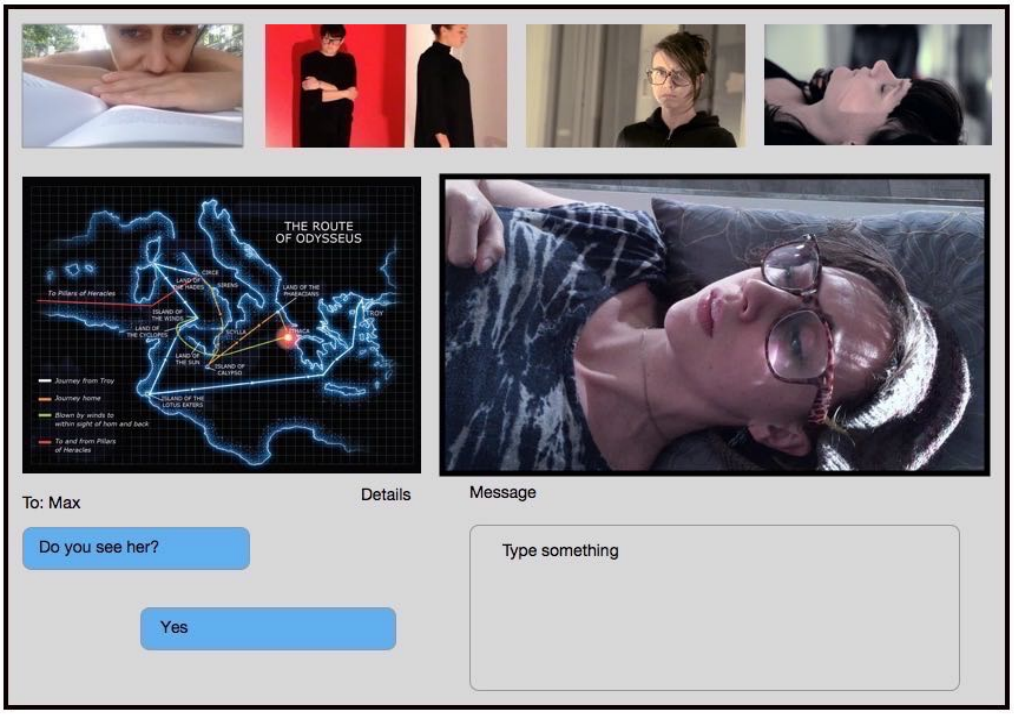
Designing the story space and set was an intrinsic to designing the narrative. The story is told in a highly visual way, so the set design acts as a part of the narrative. The rooms have an emotional quality, highlighting events and framing characters. Because the live nature of the event would not allow for post-production and editing, each aspect of the set had to be designed to sustain interest

for a long period of time and to frame the actors and the action in compelling ways. Set design choices were also influenced by understanding that the event would be viewed on a screen, with close ups included in the array of visual perspectives. The color of the wallpaper was chosen to enhance the actors' faces and bodies during close ups; props were selected for both visual interest and emotional impact.

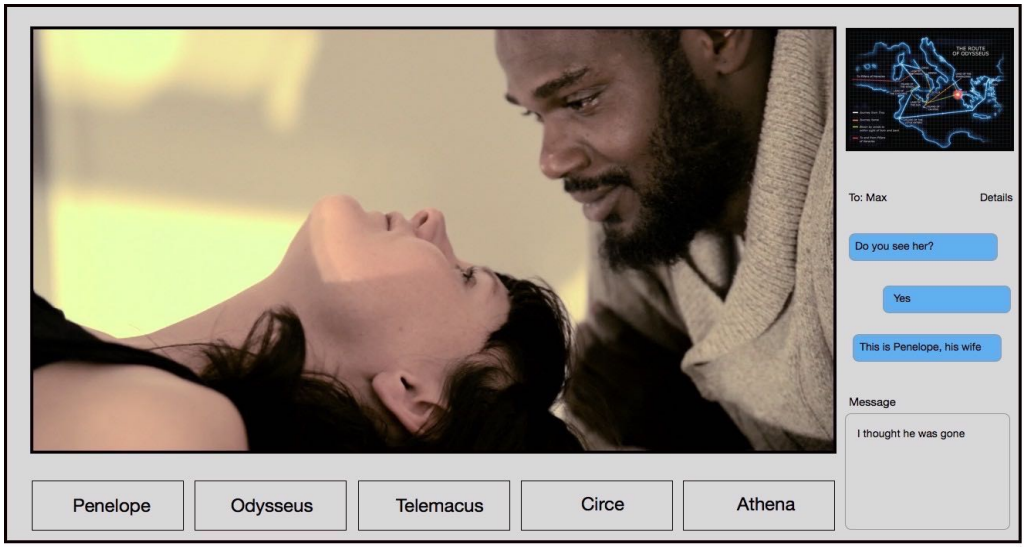
In designing the story space and the set I applied research design methods, evolving my ideas in the same organic process I used to design the narrative and interactivity: working collaboratively and through layers of iterations, and creating a feedback loop to reflect upon before moving forward. We found many answers to our questions about the story and its characters through the process of designing the physical space. We also addressed questions relating to liveness and mediatisation in the design process – the physical and visceral properties of the designed object, in this case, the set, had to be transmittable and affecting in the televisual experience, preserving the aura of liveness in broadcast.

5.6 Audience Experience

This section contains records and analysis of my experimentation and design of user interface as well as challenges I encountered designing an interactive model that could work with live performance.



Figures 31, Initial Interface visualization (Jennings, 2015)



Figures 32, Initial Interface visualization (Jennings, 2015)

Creating a user interface and interactivity was the biggest challenge in developing the project. My ideas regarding audience interaction changed significantly as the company and I progressed in developing the story. As I remarked earlier, I initially planned to pre-shoot the performance, using the canned footage as a main narrative component and limiting the live portion of the event to real time communication between audience members and a narrator. The narrator would be present throughout the performance, appearing in a separate video feed on one side of the screen. The viewer would watch the story online and comment on their experience by text messaging. The narrator would respond using messages, voice or action. The interactive experience would be available to one viewer at a time. The narrator would discuss the story with the viewer while in character, and would re-mix the scenes according to the viewer's input.

Figures 33, Interface prototype (Jennings, 2016)

Keeping the power of switching scenes and locations with narrator, rather than giving it to the audience member, allowed us to retain some control over the flow of the story's narrative continuity while still being responsive to the viewer. The main issue brought up by viewers after testing this interface was the lag in feedback and their confusion when viewer clicks did not result in an immediate action.

Work on the user interface and interactivity included brainstorming sessions with the members of the collective, prototyping during the improvisations and the precedent study included above. The brainstorming sessions focused on the role and importance of interactivity. The main challenges were to specify: why interactivity would be offered; how it would benefit the story and viewer experience; and what form of interactivity would be most meaningful for, and feel organic to, the audience.

The first prototype was created to test the efficiency and use of texting by the audience while they watched the story. For that purpose, the actor who performed the narrator role and I developed a system of exchanging messages written on the sticky notes while the action was taking place. The notes were attached to the walls and set pieces where the narrator would find them and write the response. Other actors became involved in this messaging system and added to the experience. In the debriefing following that improvisation, the company and I discussed the experience. The main concern we identified was the disruptive nature of this type of the exchange.

Figures 34, *Seeker Number 1*, rehearsal, Zuke Studio (Jennings, 2016)

The texting overtook the story and became a central viewer experience, rendering the story weaker. The narrative experience became secondary to the interaction. Another issue was with the content of the messages and the act of writing while watching as well as the ability of the narrator to moderate the messages on the fly while in character. With our objectives clear, we rejected this prototype and sought a different type of interaction.

The desire to reach a bigger audience led me to rethink the initial premise of a single interactive viewer and seek a method that would work for multiple viewers. The one-on-one exchange with the narrator morphed into a group text chat among viewers, running in a side bar under the narrator's video feed. The narrator would address selected questions from the chat. Additional interactivity

was added with a few action icons in the bottom bar, which would allow audience members to vote on what action to take to affect the direction of the performance. The actions would vary, including turning off the lights, making the phone ring, and turning on the radio. A small program was written, using Processing, which calculated the number of clicks on each of the icons; when the set number was reached, the program alerted the narrator to take the winning action.

I prototyped this interactivity format and discussed it with the members of the collective. Their feedback made clear that texting continued to distract viewers from watching the scene. They misses important moments in the story because they were planning what to type or typing. Conversely, the action icons worked well, adding a sense of liveness and play into the interaction. The main criticism of the icon system was the lack of the instant click feedback and the disappointment when one's chosen action lost the vote.

After further brainstorming in conversations, bodystorming and paper prototyping, we developed a plan for using visual symbols instead of text. Research into systems of visual communications, icons and glyphs brought forth a new line of inquiry: Can a visual language be developed that the audience can master easily through, or at least while, watching events unfold?

The next prototype used these images instead of text. Six icons with different facial expressions were sourced.

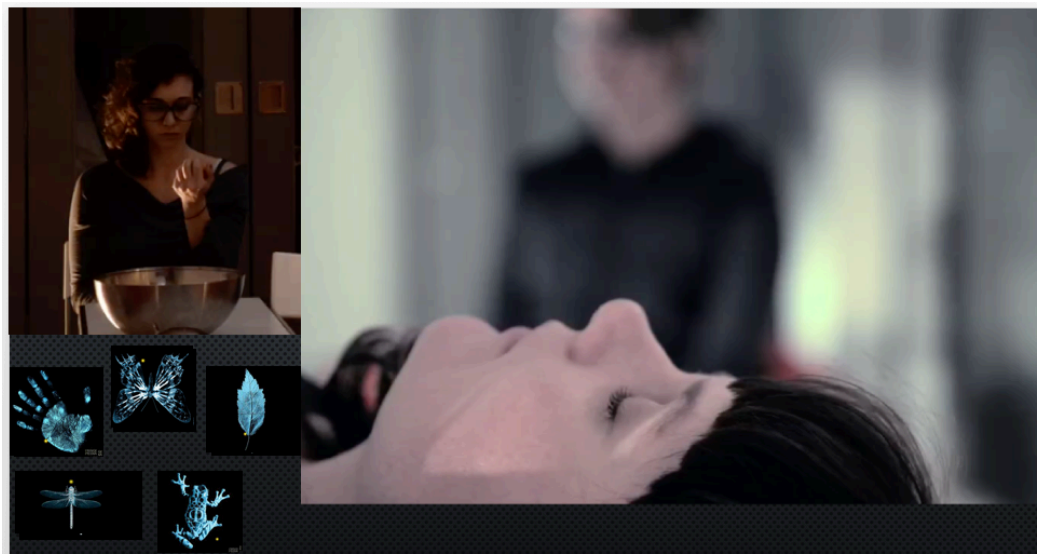

Figure 35, Comedia Dell'arte masks (n.d.)

The viewers were able to use the printed icons on the glyphs throughout the improvisation, registering through them an emotional response to action in the scene. The idea of adding short videos reflecting the audience's emotional state was considered. Those videos would appear on the main screen interrupting the live broadcast when a set number of clicks was reached. The videos would have to be somewhat connected to the story, but not necessarily directly so. They might include a disruption in the environment, such as the beginning of the storm, break in the clouds, a fight between wild animals to emphasize surprise, relief or anger. The videos would have to be sourced, and the actors would have to reflect in their performances the signaled change in mood.

The next prototype used action icons, and reduced the number to three: Divine Intervention, Wild Card and Oracle. Divine intervention, when selected, produced any number of events that could affect the scene in unexpected ways.

Wild Card offered a fifteen second, pre-shot video with an additional scene revealing something important about the characters or the story. Oracle initiated a divination ritual, performed by the narrator, with participation of two god characters who gave their take on events and warned the characters about possible dangers. The prediction in the ritual was spoken in incomprehensible language and then interpreted for viewers by the Narrator.

I considered adding a search function so that the event could benefit from the encyclopedic nature of the Internet. A collection of additional information relevant to the story could be accessed on the website through use of visual icons. The icons would be paired with objects in the scene which actors acknowledge or handle, and which are meaningful to the story, such as a letter, book, or photograph. If the viewer's curiosity is piqued about the object, they can search for it in a library of visual images, click on it and learn more about the object and through it, about the story.



Figures 36, Interface prototype (Jennings, 2016)

Throughout our experimentation with the interface and interactions, we raised questions about match with our goals, quality, originality, usefulness and meaningfulness. One problem for which we never found a solution was how to tailor the interactions and resulting story changes for each person concurrently watching; the voting system was likely to generate frustration in those who do not get their choice played out. Additionally, the interactive interface was becoming overly complex, its many functions each necessitating a separate explanation. There was a sense that we were forcing the interaction onto the story rather than organically building the story around it.

In an attempt to gain better insight into our interaction design problem, I organized an informal focus group with my classmates. I reflected on the interaction design process we used and reviewed various versions of interactivity we experimented with. The resulting feedback identified problems with the clarity of purpose for the interactivity and the resulting effects on the performance, which did not seem to add value to the story. The purpose of the interaction was the interaction itself. It did not transport the audience to the domain of the story neither did it add meaning or enjoyment. Most of our effort went to convincing the audience that the event was happening in real time and that their action could affect the performance – but for what purpose – that was not clear at all. The affordances of the computer – procedural, participatory, spatial and encyclopedic – did not enriched the dramatic experience by just being offered. They did not enhance the emotional experience or produced deeper understanding of human

condition. There was no necessity to use them. They were not essential to the story. Making the story compelling was much more important. The computer had to become a tool to assist in telling the story in a compelling way – not to obstruct the story's flow or purpose.

Processing the feedback from my classmates and taking into account my own intuitive response, I decided to change my approach to the interaction itself. I shifted my focus to the idea of Liveness and Presence in the digitized performance and the environmment of the exhibition where the work would be presented. The goal of producing an online experience for a bigger audience would remain relevant to future experimentation and production, but for the purpose of the exhibition of this project, interactivity would be accessible only to one person at a time. With that in mind, I looked at the interactivity through the different lens. I returned to my initial idea of an intimate, voyeuristic experience, and to building a connection between the viewer and the performers. I kept the idea of enabling the audience to explore the digital space for more information about the characters. As I was focusing on those aspects of the experience, I had an image of an empty perfume bottle, still containing the absent contents' scent. When the viewer picks up the bottle, the screen image changes to a woman standing in front of a mirror, with the full perfume bottle in her hand. The intimate space, the sent of the perfume, the image of a woman close up on the screen, the woman who is unaware of being watched and yet shares this moment with the viewer, because of

the immediacy of her presence. To create an affecting physical and emotional experience in the moment of interaction became a new direction for our project.

Through multiple iterations, brainstorming, improvisations and prototyping, we ended up with a very different approach from what we started with. The interactive interface for the story became an installation with physical objects. The environment was created with a desk, a large TV screen and four boxes, each containing objects relevant to one of the characters. As the viewer opens one of the boxes, the TV screen comes to life and one of the characters appears on it. The objects in the box are duplicated in the performance space. They might include an empty perfume bottle, journal, letter, toy car. But on screen, they are presented in a different state: the perfume bottle is full, the journal is new, and the letter is unopened. The viewer would be able to explore the objects in the box, leaf through the journal which had been filled up, pick up the toy. Opening a different box would change the live stream: a different character, the one associated with the newly selected box of objects, would appear. The actors continue performing the story without interruption, though they are made aware of which of them is being watched so that they can adjust their performance in small ways. Sometimes, all the characters meet in the same place while at other times, they occupy different spaces. Each actors would be intimately familiar with the objects stored in their box, and might choose to use some of them when the viewers are watching them. With this method, the connection between viewer and performer is subtle, but unquestionably live. The boxes are wirelessly connected

to the computer. Opening the lid sends a signal to the operator, who is responsible for switching the feeds from the cameras and letting performers know whose box has been open. The Liveness of the performance would be the result of the awareness of the actors that they are being watched, their intimate objects which are meaningful to the story and to their characters are being explored and related to them. By employing a physical interface through digital means, we designed a form of interaction that reflects the quality of liveness I sought for this project. This format of interaction has its limitations, the most obvious being that the event can only be interactive for one viewer at a time. It does not fulfill our original purpose of interactively engaging a wider audience, though it does address the issues of liveness, emotional connection, and impact. I believe that it is an important step in the company's development of meaningful audience interactivity. Using research design and reflecting on our process, we were able to find an unexpected yet appropriate solution to the problem of interaction in a digital/live event.

Figures 37, Final interface prototype (Jennings, 2016)

CHAPTER VI - CONCLUSION

As a working theatre artist, I have been immersed for over 30 years in creating art objects consisting of and powered by live matter, living, breathing, unstable and finite; the elusive, vanishing footprints and sand castles held together by imagination and collective effort. I have experienced firsthand the power of human presence, the exceptional focused energy of actors who can hold incredible power over their audiences and fill each member with compelling emotions and share a collective, deeply affecting experience. Live theatre as a storytelling medium has held its own among film and television broadcasts, despite the latter two's advantage of reaching incomparably wider audiences. However, a decade of mass proliferation of digital technology, Internet and social networks has shifted this balance. The immediate accessibility of on-demand content, the rise of long form, complex, episodic TV storytelling, video games, and mobile computing has changed the nature of the contemporary audience and its expectations forever.

Good live theatre can usually still draw an audience, especially when it promises spectacular effects and ingenuity. Theatre companies, though, are struggling to maintain the same significance and cultural potency that they had in the past. Live performance's ritualistic powers have waned, dwarfed by endless technological and scientific miracles of interactivity; its place as a public forum has been overtaken by the global, open exchange of ideas and emotions among online communities and through social networks.

Yet, the property that is the very essence of live performance–its liveness–seems to escape digitisation. Despite readily available live on-screen communication software real-time video presence still lacks the intimate power of being present. It seems to dissipate into the air as the image passes through various states of deconstruction and recombination. It is possible that liveness is not transmittable by digital means, or perhaps what is true is that a special effort must be made to power live energy through virtual space (across the digital divide). (This may be similar to the extended, heightened energy actors must access and project on stage in order to reach across the proscenium.) If the latter is true, then live performance can find in cyberspace another territory to explore and conquer.

The proliferation of computers and Internet changed the way stories are told and gave authors access to new tools. It brought to life a new field, Interactive Digital Narrative (IDN), and posed new set of questions. How might a story be told to an audience empowered with agency, who has means to alter the narrative structure and seeks an immersive, emotionally compelling experience? What is the role of an author in such a narrative? How might relatable and complex characters come to life in an interactive story? Those questions continue to be relevant today.

Using design research method for my inquiry and reflecting on my practice throughout the process of creating *Seeker Number 1* I asked those questions:

- How might the inclusion of live performance affect the creation and experience of interactive digital narrative?
- How might the aura/presence of live performance be re-discovered in post-organic performance?
- How might we establish processes and practices that support the creation of such experiences?

In this period I have explored how the inclusion of liveness affects the experience of IDN storytelling, how an actor's presence and energy could be fine-tuned in order to transmit the aura of live performance online, and what methods and techniques could be used in order to create such an experience.

My hypothesis was that liveness would enhance the quality of emotional effect in digital storytelling if it could be rediscovered in the cyber performance. In order to test this hypothesis, I worked with my company, Kadozuke Kollektif, to adjust the direction and quality of the actors' energy and their internal connection to the online audience. I discovered that the quality of performance for an online audience must be different than for a camera shooting footage to be edited and manipulated later on; an online audience is more akin to a live, in-person audience - the connection to them has to be a prerogative of the performer. The difference, of course, is that an actor receives immediate feedback from a live audience and can often adjust the performance in response to it. In online performance, actors are more likely kept in the dark about viewer response, relying instead on their own estimation of the performance and its rate of success.

Kadozuke performers were concerned about a lack of audience feedback from the very beginning. We worked on suggestions for various feedback indicators, such as small LED lights which turn on when members of the audience sign in, or a video connection where the actors would see the audience through a Skype-like feed. None of these suggestions were incorporated into the final prototype, though this would be an interesting line of further inquiry. With evolving technologies, it might soon become possible to create a feedback loop for performers by measuring the audience's levels of engagement through sensors in wearable devices and through face-recognition software and hardware that read the changes of facial expression to interpret the audience's emotional response.

Another challenging line of questioning was directed at the possibility of interactivity and its effects on narrative coherence and performance continuity. The promise of agency in IDN remains difficult to deliver without significant detriment to emotional engagement with the story and its characters. I prototyped the various modes of interaction, such as mouse clicks allowing to change the direction of the story, or selection of different branches of the narrative to follow, as well as commenting streams in the sidebar, and found them to be limiting and disruptive. Nonetheless, I was determined not to ignore the new affordances of this computer age. In our collaborative exploration, the company actors and I struggled to devise a way to make interaction feel meaningful, necessary and organic. Interaction for its own sake was not the goal; employed just because it is available, interactivity is merely a gimmick. Finally, we settled on a simple,

explorative interaction. We decided against allowing the audience to significantly affect the narrative, opting instead for them to have a subtle effect on the actors' performances. Our design, using the actors' awareness that the viewer has shifted focus to them, is meant to be a gentle, ambient interaction with subtle impact that accumulates over time, adding to an intimate sense of presence. In the final version, we removed almost all signs of digital mediation in the user interface, substituting them with physical objects, preserving only the essence of the interaction and making invisible computer's presence. As the audience explored objects displayed on the table, its choices affected changes on the screen and in the performance space. The liveness was manifested in both – real-time actors' presence and interaction of the audience with the physical interface. Walter Benjamin's aura, "a strange wave of space and time" (Benjamin, 1996) was present through the reality of live connection between the two events. Actors performed not for the machine, but for those viewers whose presence was real to them and whose agency was manifesting itself through the shifting focus of their interest.

This was a solution which worked very well within the exhibition setup. Its obvious drawback is that it can only work within such an installation and would be impossible to use were we to move the story online and include a wider audience.

The biggest challenge of this project was creating a meaningful story that could be told in an interactive format. I struggled to adjust my theatrical

sensibilities to an online environment and to shift my thinking into the language of the virtual domain. The boundaries and opportunities of a live performance in a physical space does not apply in the virtual world; I needed to discover, and perhaps even invent, a new set of rules and understandings. I studied the signature qualities of IDN, the non-linear way narrative unfolded and the added functionalities of the interactivity, re-configure them for an online performance with a strong aura of liveness. It took multiple unsuccessful attempts before I found just the way to tell this story. The actors and I invented our own rules to respond to the interaction and to adjust tension and timing of the performance to fit the online format. Our exploration only just began to determine those rules – we expect to need much more experimentation and work in this area.

We discovered that, as a group, we had to translate the language of live theatre into something different, with unfamiliar symbols and structures, in order to communicate the story's thematic significance and emotional affect online. The nature of audience interactivity and agency demanded that we structure our content differently. We explored various ways of creating a discoverable story that maintains its own rhythm and timing; a story which could be watched from any viewpoint and still be captivating; an open enough narrative so that each audience member can apply their own sensibility and interpretation, that is solid enough to hold onto narrative depth and integrity.

In the last two decades, practitioners of IDN have made a lot of progress in describing the new paradigm and identifying its logic. I feel that my exploration

into the role of liveness in the field adds a new dimension to the discourse and provides a new exciting avenue to explore. My research into the role of liveness in the mediatised culture and the development of IDN led me to identify those aspects of the discourse in which I am most interested and could see myself contributing something new. Those areas are concerned with the creation of a strong emotional response (catharsis) to a narrative which organically incorporates audience agency and offers compelling and detailed characters with whom the audience can connect and relate. This project allowed me to experiment with liveness in a digital context and to explore a different quality of performers' presence, one that creates a sense of intimacy and connection in an online delivery.

Human-computer interaction have altered the very nature of how today's audiences engage with storytelling. The power of audience agency, interaction and immersion offered by digital technologies has changed forever the very nature of engagement with what we, perhaps inappropriately, still call viewing media. I suspect, though, that the ages' old art of live performance has not been left in the dust as everyone rushed into the new and shiny digital world. Live theatre has just been waiting for technology's dust to settle and for these new-fangled, technological instruments to become sensitive enough to register the unique qualities live theatre has to offer.

6.1 Next Steps

After the conclusion of the program I intend to continue research into IDN and experiment further with narrative structures/elements and actors' presence in the digital space. Through my research I realized that some aspects of liveness and interactivity are counterproductive to each other; moving forward, I will have to make choices regarding the direction to follow in striking a balance. I will apply for grants to continue working on *Seeker Number 1* with Kadozuke Kollektif until the project is ready to be released online in serial format.

I may continue experimenting with liveness in installation format to complement the digital interactive material which I will make available on line. I also plan to experiment further with the use of mobile streaming. I would like to explore an opportunity to stream content simultaneously from different locations so the story would not have to be limited to one space, but could include more participants and locations. If this will prove possible – I would like to collaborate with international partners to situate the story in both local and global contexts.

In the immediate future, I will look for a gallery to exhibit *Seeker Number 1* installation.

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APPENDICES

Appendix A – Set Construction and Filming

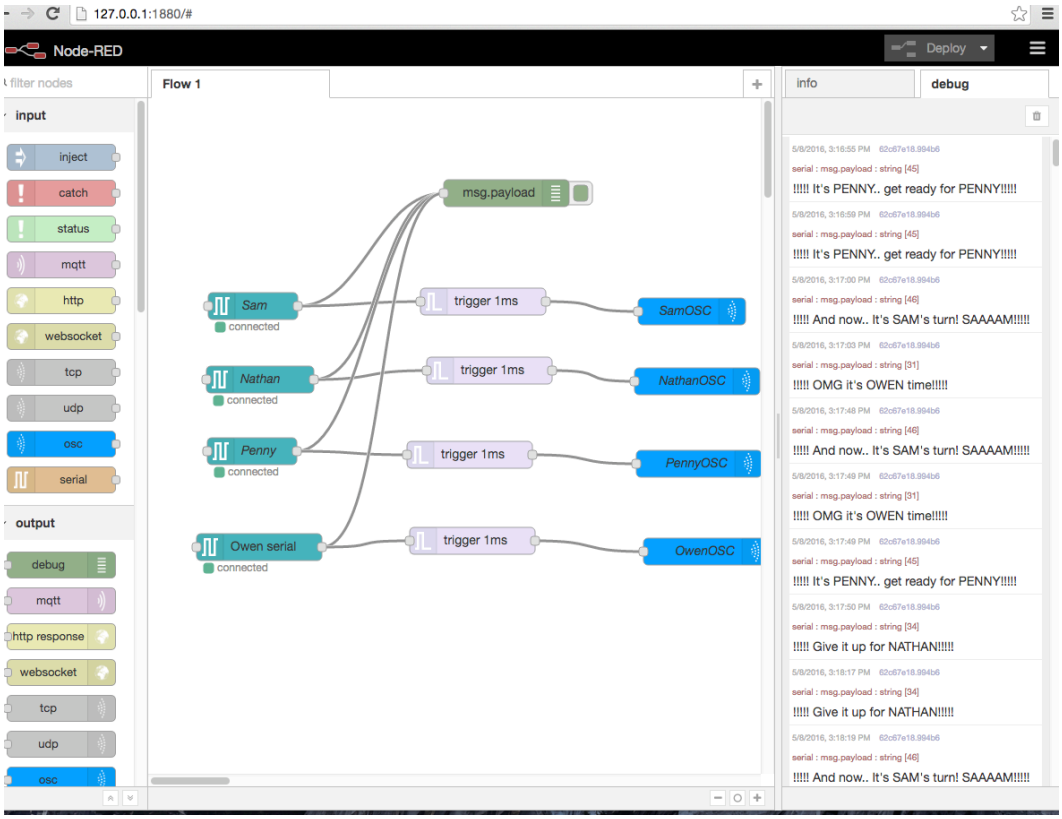
The set for *Seeker Number 1* was constructed inside Zuke Studios performance space. Honeycomb cardboard sheets were used for the walls. They were fastened together using Velcro tape and finished up with baseboard strips. Rooms were dressed up with different types of wallpaper to resemble a realistic apartment. The set was lit with a combination of ambient lighting fixtures and professional film lighting equipment.

Figures 38 - 44, *Seeker Number 1*, set, Zuke Studio (Jennings, 2016)

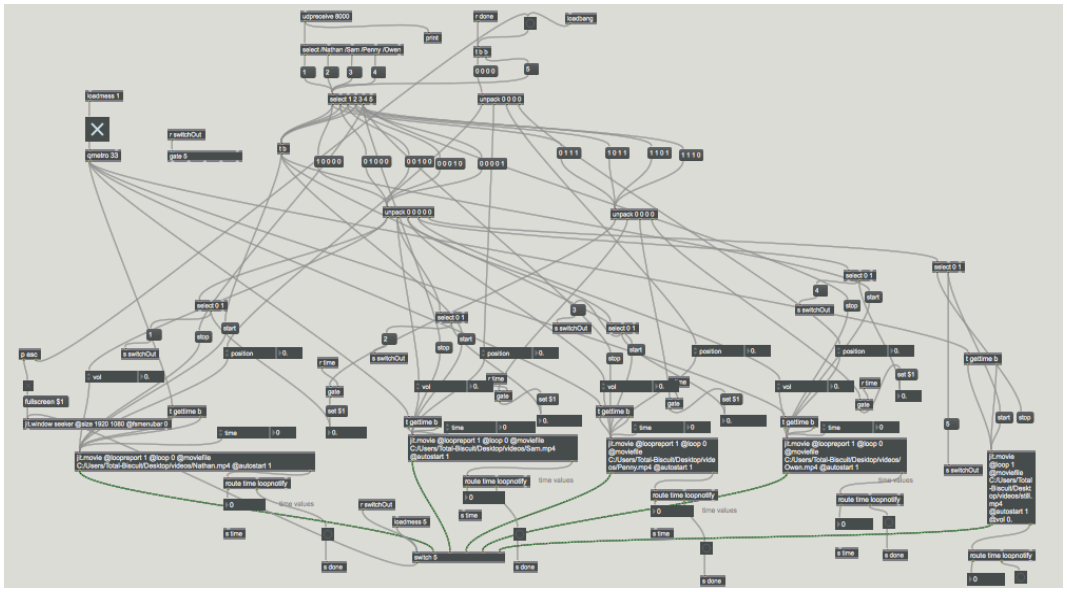
Appendix B – Technology

For the live performance the Lightblue Bean controllers were programmed to send messages using web socket to the operator, who worked with the switcher ATEM board. The opening and closing of the boxes was registered using accelerometer, which is a part of bean controller. Each time one of the boxes was open – the operator received a message and switched the feed to the character associated with the box. The video feed was streamed using Skype.

During the exhibition the beans were reprogrammed to activate one of the video recordings using WebSsockets in combination with Max patch.



Figures 45, *WebSocket* sketch, screenshot (Jennings, 2016)


Figures 46, Max patch, screenshot (Jennings, 2016)

Appendix C – Installation

The installation took place at the Open Gallery of OCAD at 49 McCaul from April 15th to April 20th 2016 as a part of Digital Futures Graduate Exhibition. Seeker Number 1 was performed live on April 15.


ATIANA JENNINGS,


天真樂
BFF


WE WON'T GO DOWN
TO THE HOUSE OF DEATH
NOT YET

Dear Penny & Owen,

On behalf of the admission board and management of H. I. Academy , I feel immense pleasure to inform you that your son has been accepted as a student of our school following his application last year.

It is a matter of honor for H. I. Academy to have such an intelligent and enthusiastic student enrolled with us. Your son will have to report at the school on the 27th of June 2018 at 11:00 am in order to complete the admission process. You are required to bring, on that celebrate and documents on that day.

Kindly study the enclosure for the list of the requirements. I have also attached the school brochure to guide you better about the rules and regulations of the school and the things that to expected of you. In the meantime, attached to this letter is a prospectus of the school containing relevant information.

Congratulations on completing a milestone in your life and embarking on a new stage in your education.

With best wishes and regards,

Mr. Alton Collins

Principal & Director H. I. Academy

Figures 47 - 60, *Seeker Number 1*, Installation, GradEx, OCAD (Jennings, 2016)

Sample Multimedia Appendix - Owen

This appendix is a video file of a live performance recorded on April 15th 2016.

The video follows the character Owen, performed by Lee McDonald

Sample Multimedia Appendix – Penny

This appendix is a video file of a live performance recorded on April 15th 2016.

The video follows the character Penny, performed by Katelin Richards

Sample Multimedia Appendix - Nathan

This appendix is a video file of a live performance recorded on April 15th 2016.

The video follows the character Nathan, performed by Sefton Jackson

Sample Multimedia Appendix – Sam

This appendix is a video file of a live performance recorded on April 15th 2016.

The video follows the character Sam, performed by Dave Fish